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# Part First.

## ORIGINAL COMMUNICATIONS.

### ARTICLE I.—*Address delivered at the Opening of the Winter Session of the Edinburgh Medical School, October 28th,* 1879. By J. BATTY TUKE, M.D.

GENTLEMEN,—When I was asked to deliver the opening address to-day, it was with somewhat subdued feelings that I reckoned that twenty-eight years had passed away since I sat on those benches as a first year's student, and listened to the words of wisdom which fell from the lips of Richard M'Kenzie, or, as he was more generally known, Dick M'Kenzie. It seemed but as yesterday that he stood where I do now, his handsome face and stalwart figure asserting their influence, and his kindly words of advice and encouragement were sounding in my ears; and then, as if but a few weeks later, that the story came to us of the ringing cheer of the Highland Brigade on the heights of Alma, thanking him, in soldierly fashion, for the succour he had afforded to wounded comrades on the field of battle; and then that the rumour came—soon, alas! to be confirmed—that he was dead, stricken down in his strength, almost within the very hour of triumph, by that fell disease which laid low so many of our Crimean heroes. I daresay you never heard of this man, but you must excuse me this short tribute to the memory of a splendid surgeon and most kindly gentleman, who, had he lived, must have taken a foremost place in the ranks of surgery.

The yesterday I speak of, however, is the yesterday of a quarter of a century, and I find that I have lived into a position which entails on me the performance of a pleasant and at the same time somewhat difficult duty. Now unless a man, under such circumstances, takes up some fundamental principle of medicine or the cognate sciences, and amplifies it, as much for his own delectation as for the immediate benefit of his hearers, or magnifies the value of his individual speciality, or simply enunciates a series of moral platitudes, he is bound to fall back on personal experience, and to strive in some wise to bring his yesterday into relation with your and his to-day, to link the student of middle age with the student in his teens, to associate in kindly relation the teacher with the taught. And although I am but nominally a teacher in this School, I trust I may not entirely fail in this object—perhaps the very peculiarity of my position may permit of my speaking even more openly than were I a systematic lecturer; it may permit of my expressing my sympathy more distinctly with the difficulties of the medical student of to-day, and allow me to offer freely a few suggestions which may be of some practical value to you individually and collectively.

Six years ago, my respected friend Dr George Balfour drew, in his introductory address, a vivid picture of Hippocrates, released for a space from Hades, walking into one of the clinical wards of the Royal Infirmary, and surveying with silent yet dignified wonder the changes which had taken place in the methods of diagnosis and treatment of disease during the intervening twenty-three hundred years. He was pictured handling for the first time a stethoscope, a test tube, and clinical reagents, gazing on galvanic batteries and other apparatus as unkent to him as the locomotive, and feeling at the same time not perfectly disposed to abjure the principles on which practice had been founded in the Asclepion of Cos. But I feel equally justified in picturing to you the Syme, the Bennett, the Alison, and the Henderson of 1850, stepping into our wards in this year of our Lord. Picture to yourself the Syme, who in those days was wont to amputate a limb in simplest fashion, surveying the Annandale of to-day performing the like office shrouded in a halo of carbolic spray generated by a steam-engine, laving himself and his instruments and his dressers in mysterious lotions, suspending the limb to be removed from a gallows, and investing the stump in complicated dressings. Fancy what would be conveyed to him by 1 to 20, 1 to 40, 1 to 60; it could but sound as a mystic Abracadabra. Where would Bennett have been amongst the complicated apparatus by means of which Rutherford now illustrates his course? What did Henderson know of those delicate sections which now-a-days enable the Professor of Pathology to bring palpably under the eyes of his students the solutions of histological continuity constituting disease? Picture to yourselves Alison with a sphygmograph, a laryngoscope, or a hypodermic syringe placed in his hands: fancy M'Kenzie, the leading oculist of that time, asked to make use of an ophthalmoscope:—it is needless to pile up further instances for my present purpose, the few I have adduced cannot but serve to illustrate the position, which is, that any one of those professors of 1850 would be not one whit less dazed in 1879 than Hippocrates was fabled to be by Dr Balfour.

Nor would they be dazed merely by apparatus, but even more by the results procured by these appliances in terminology and diagnosis and treatment. Allow me one or two instances: as in 500 B.C. Hippocrates was content to regard the Dropsy as a pathological entity, so in 1850 the Professor of Medicine was unable to do more than speak of loss of muscular power as paralysis or palsy. You know, or shortly will know, that dropsy is a mere symptom dependent on various diseases of various organs. This knowledge we would have vaunted before Hippocrates in 1850, but what could we have said then as to paralysis? We certainly had a suspicion, perhaps more than a suspicion, that loss and perversion of muscular power demanded more particular analysis; but when I tell you that at that date locomotor ataxia, progressive muscular atrophy, pseudo-hypertrophic paralysis, aphasia, and the other results of special nervous lesions, were utterly unrecognised, and when met with were spoken of merely as curious forms of palsy, I think you will grant that, as regards nervous disease, we were in no better position then than Hippocrates when he descanted on the dropsy. Need I allude to the revolution in the principles and practices of surgery brought about by the enunciation of the Listerian theory, by the revelations of the ophthalmoscope and the microscope, in support of the position? Do not fancy for a moment that I am asserting too strongly the progress of medicine and surgery during the last thirty years; it has been considerable, but there are vast Saharas—gout, rheumatism, cholera, hysteria, epilepsy, insanity, and many others—which are but indicated on the map of science by a generic name standing in a broad space of symptoms. But when I reflect how such spaces have been traversed by explorers during the last quarter of a century, how highways have been driven through them, how we may fairly hope that other pathological deserts may be opened up through improved methods of investigation, I confess I stand somewhat appalled at the future of the medical student; I stand appalled even at his present position, when I reflect how very much more scientific knowledge he has to acquire than the student of thirty years ago; how little improvement has taken place in the direction of his education towards a proper understanding of the science of physics by means of which the advances in medicine and surgery have been mainly made, and how heavily he is overweighted by having to acquire a vast amount of non-essential knowledge. Not only has the candidate to be a better physiologist, anatomist, and pathologist, but the aspirant to university honours has to be a better botanist and naturalist. I have no hesitation in saying that in my opinion the candidate for university honours is unnecessarily weighted by being called on to be a naturalist or botanist at all. As regards these sciences, the medical student is sorely taxed in pocket, and, what is far worse, in brain power. I wonder whether the world has any conception of what a pillar to science the medical student is; he is taxed in pocket to support the teaching of a subject, such as botany, which is of vast importance to the community at large, but which has not only no bearing on his professional usefulness, but is the bugbear of the early years of his studentship, and the means of robbing him of most important time. I think it was Huxley who said that it would be quite as rational to teach a student of surgery how to produce a knife from iron ore, as to teach a student of medicine botany with a view to his better employment of the pharmacopeia. But the matter is far worse than this: according to the calendars of the various universities, the candidate has been forced, amongst other frivolities, to grind up some twenty or thirty natural orders which may or may not contain articles of the pharmacopeia—to what end? as far as he is concerned, to forget them as soon as possible after he has passed his "first." But not so as regards the public, which derives immense benefits, not through the smattering of the science acquired by the medical student, but by the maximum obtained by the men whose purpose it is to make botany a special study. At the cost of the medical student, forestry, vegetable acclimatisation, and the other practical outcomes of the science, are obtained. So with natural history. It is all very well to say that these sciences exercise potential influence over medicine, and so doubtless they do indirectly; important deductions have been drawn, but to imagine that the student can acquire a sufficient amount of knowledge to understand the processes through which such deductions have been drawn is ridiculous. I strongly suspect that you have to accept statements founded on physics of a vastly more important nature than those drawn from either of those two sciences. Your examination in physics, however, requires nothing more than a smattering of knowledge, which may be ground up in a few weeks or even days; whereas, as regards botany and natural history, months are required and wasted. If, however, it is still thought necessary by the regulators of medical education that the student must be taxed in pocket for the support of these university chairs, it would be but fair to take this into consideration, and to relieve him somewhat of his burdens by insisting merely on an examination on their general principles as a part of his preliminary trials, and by abjuring an anachronism, conserve his brain power for the essentials of his profession, and his time for the study of disease.

But it is not only in non-essentials, but also in essentials, that the student of medicine is becoming year by year more heavily weighted. The widening of medical science and the improvements in medical teaching bring with them a degree of hardship. The professor finds that the field is now so vast that he cannot possibly traverse it in the six months' courses of lectures, and, as a consequence, extra classes have been instituted, which, although of great value to the student in enabling him to acquire an accurate knowledge of the various subjects, entail a considerable increase of money outlay. Now, of course, we know it is not necessary that he should take out certain of these practical classes, but at the same time we know that, for many reasons, it is better that he should. Amongst others, unless he be a man of more than average ability or industry, he cannot acquire the amount of knowledge necessary to stand the tests he will be subjected to on his examination. Now, I don't say that the examinations are unnecessarily severe, or that they comprise departments of the various sciences unnecessary for the student to be acquainted with, but I do think it is a hardship that, because the teaching of a science cannot be overcome in the regulation course of lectures, he should be obliged to pay for extra courses, which enable the professor to overcome his subject. If the teacher is not sufficiently well paid for the work he has to do, the fair and proper thing would be to raise his fees, on the understanding that he was to teach his subject thoroughly and comprehensively, so that the student might know distinctly at the beginning what the total cost of his education is to be; for as the various sciences become amplified, so will there be an amplification of practical classes, and a consequent amplification of expense. And here, again, we come upon a means by which time is withdrawn from the period during which is to be obtained that personal intimacy with disease, which, after all, is the aim and object of medical education. If a candidate for the *honores summæ medicinæ* desires to obtain them within the prescribed four years, the really practical part of his studies in respect of medicine must be relegated to a very few of the last months, and he sets forth into the world with a tin box in his hand, a vast amount of theoretical knowledge, a minimum of practical experience, and in almost total ignorance of many important departments of medicine.

Now, gentlemen, these considerations lead me to offer you the first piece of advice—take a university degree if you can afford the time, which should not be less than five years of study. A university degree gives a status which cannot be overrated; it is a thing to be proud of; it affords the highest assurance to the public of the thoroughness of a man's education; it is a comfort and satisfaction to himself, a very great luxury, but, like all luxuries, is expensive. It entails expenditure of money, and, as shown by Professor Turner's evidence last summer before a committee of the House of Commons appointed to inquire into the subject of medical education, is expensive in point of time, for he then stated that seventy-five per cent. of the bachelors of medicine of the University of Edinburgh take five years to obtain their degrees. I say again, spend these five years to this end if you can afford them, but if not, content yourselves with one or more of the licenses of the various corporations who grant qualifications in medicine and surgery. Mind you, I do not assert that these qualifications are as good as the university degrees. I do not say that the examinations are yet quite up to the mark in theoretical or even in some practical subjects, but we have reason to believe that the examinations in the practice of medicine, surgery, and midwifery are quite sufficient to test the candidate's capacity for the exercise of his profession, and, to say the least, are on a level with those to which he is subjected at the universities. And we have further reason to believe that the force of circumstances will compel the corporations soon to improve the examinations on those subjects which some of us believe to be not quite up to the mark. I offer this advice not entirely in your interest—quite as much, in fact, in the interest of the public—for by taking a license instead of a degree, a man is more likely to gather in four years a practical knowledge of his profession, than by forcing into the same time all the essential and non-essential subjects demanded by the university curriculum. He is exempted from botany, natural history, and to a certain extent from chemistry, having only to acquire such an amount of knowledge of this subject as is sufficient for practical purposes, and he will be able to apply the time thus saved in bringing himself face to face with disease. Doubtless Professor Turner's statistics showed that twenty-five per cent. of the bachelors of medicine pass after four years' study, but I have been assured by several men who have overcome this task, that it was done at an enormous expenditure of brain energy, and to the prejudice of practical work. Moreover, we may be pretty sure that the members of this twenty-five per cent. will be able to spend a year or two in hospital work after taking their degrees. But for the man who has a limited purse and only four years to spend in study, a license is preferable to a degree. It is possible to obtain a license in three years, but I trust that soon this opprobrium will be removed either by direct regulation or by increased severity of examination. The idea of a man being fitted for the work of a medical practitioner in three years' time is preposterous, unless, having been an unqualified assistant or an apprentice, he has previously acquired a certain intimacy with disease.

Now, you will ask what is the practical knowledge I have spoken of so much, and where is it to be got? Now, gentlemen, the practical knowledge I speak of is not to be obtained by merely walking hospital. In the Infirmary you will study under the direction of your teachers the more severe forms of disease. And here permit me to point out what a vast advantage it is to you to have a large staff of highly-qualified men who are anxious and willing to teach you. I know of no school, except Glasgow, in which the student has such an advantage. Nothing can be more cramping to the mind than a limited number of teachers of such subjects as medicine and surgery: it is productive of a slavish following of one man or clique of men, and narrows the perceptions of the student. Highly as the Listerian theory and practice are to be estimated, it would be a pity, not only for the student but for the theory itself, were it accepted by all your teachers unreservedly. It is good for you to hear the question argued by competent men; it is good for the theory that it should have to stand the brunt of adverse criticism. And so with every point of medicine and surgery. It has from time to time been suggested that a Professor of Clinical Medicine should be appointed. This, I hold, would be a mistake, for by so doing the student would be subjected to the dogmatic teaching of an individual, instead of having the opportunity of viewing the subject by the light thrown upon it from various directions. This does not confuse him, for there is not any extreme contrariety of opinion in essentials. Sir Robert Peel used to say that the only chance of influencing the House of Commons in debate was to put up member after member each to state the same thing in a somewhat different way; and so with clinical teaching. I have heard it said that the Edinburgh school might well dispense with its extra-mural section, that section of which to-day I am the representative. Now, gentlemen, no greater misfortune could come to medical education in Edinburgh than the obliteration of the extra-mural school. It is not only a nursery for professors, but serves the purpose of keeping the professors it develops up to the mark, and enables you to see the matters in hand from various points of view. Judging, however, from its present flourishing condition, there seems to be small chance of this. There is perhaps no institution in the world which possesses such a complete staff as the Edinburgh School of Medicine. Its lecturers are forty in number, and although a few are, like myself, silent, still the position, the experience, and the reputation of the working members is a guarantee for the quality of the teaching. During the last twelve months nine new lecturers have been appointed.

But to return. Great as are your opportunities and advantages for the study of the more grave forms of disease in the Royal Infirmary, you have there comparatively little opportunity of gaining an insight into those minor complaints which form the staple of every-day practice, and on the proper diagnosis and treatment of which mainly depends your position in your profession. In the hospital you meet with disease more or less confirmed, and have comparatively small chance of seeing it during that highly important period, the initial or prodromal. It is an extremely awkward thing for a young doctor starting in practice not to be able to discriminate between such diseases as smallpox and chickenpox, or between the prodromata of scarlet fever and measles: of course this is not to be done in every case by the most experienced practitioner, but in the vast majority of cases careful observation of disease will enable you to offer a definite diagnosis. Now it is the acquirement of practical knowledge of these classes and phases of disease, of practical midwifery and of the diseases of children, which I would most earnestly impress upon you; and the place to gain this knowledge is the Dispensary, where you will meet day after day, not only with severe, but with milder, and yet not less important complaints, which will compose the mass of cases you will be called on to treat in general practice, and where you will find full opportunity for practical midwifery. The modicum of midwifery cases required by the curricula you will find to be wretchedly inadequate when thrown on your own responsibility as practitioners, and you should therefore save or make time to attend as many labours as you can under the direction of your teachers. I well remember Richard M'Kenzie insisting on this point in the introductory address I have already spoken of, and adducing his personal experience in corroboration. He told us how, on a voyage to London, a poor woman was suddenly taken in labour, and hearing that Dr M'Kenzie was on board, sent for him. In every sense of the term he found himself at sea, for having given himself up entirely to surgery, he had, as many a man nowadays does, scamped such cases. He was quite ignorant, had to confess his ignorance; and, if I remember right, was obliged to hand over the patient to a woman who possessed greater knowledge than he.

It is in the wynds and closes of our city that a considerable portion of the last year of your curriculum should be spent. It is there that you will form that intimacy with disease which cannot be acquired from books, and without which no man can be a physician. Speaking for myself, I would rather choose a man for an assistant who could show me his dispensary book well and honestly filled with the names of patients whom he had personally attended in the Cowgate and Canongate, than the holder of a gold medal for natural history or for the largest herbarium collected within twenty miles of Edinburgh. Mind you I do not say that I would not prefer a man who possessed at once the medals and the well-filled dispensary list; but where only one of these recommendations can be held, I would prefer the holder of the latter; for not only would he be more likely to be a better doctor, but the actual worker amongst disease would be more likely to have acquired a practical knowledge of the natural history of man, than he who has devoted his energies to the natural orders of plants. Truly, gentlemen, it has been said that the disease of the poor is the heritage of the young physician; and excuse me, in passing, pressing upon you the duty of working amongst the poor in the most thoughtful and kindly spirit. Do not regard a sick poor man, pauper though he be, as merely a case, a mere specimen of disease; let him see that he has your sympathy, were it only that by so doing you will acquire more thorough knowledge of his case, and that you will thereby be doing your duty as between man and man.

Over and above the time saved for the purposes of practical medicine and surgery, you will gain an opportunity of attending one or more of those non-compulsory classes on special subjects, such as diseases of the eye, public health, diseases of children, diseases of the skin, and insanity. Pardon me if I impress upon you the propriety of studying the last. In no case is the young physician so utterly abroad as when he meets with a case of acute insanity. The chances are a hundred to one against his having ever seen a case: nevertheless and notwithstanding he is, as a legally qualified medical person, invested with most important powers over the liberty of the subject by the law, on the unfounded belief that he knows something practically about the disease. Now the diagnosis of insanity is not only occasionally difficult in itself as between hysteria, hypochondriasis, and the delirium of fever, but important mistakes may be made as to treatment, especially as to whether the patient should or should not be sent to an asylum. The term insanity, which to him is a concrete term, comprises in fact many various and widely different diseases, on the diagnosis and prognosis of which depend in a remarkable degree the future of the patient and the happiness of his family. It is a disease which afflicts three in every thousand of the population; it is, in the early stages of most of its forms, very susceptible to treatment, but if neglected or improperly treated, it entails on the individual permanent incapacity, and on the community at large a heavy public burden. I will not enlarge on this subject, but will simply advise you to make a strenuous effort to attend the admirable course of lectures and clinique given by my friend Dr Clouston at the Royal Edinburgh Asylum.

Let me repeat before parting from this subject—Take your degree if you can; it will be better for you in every respect if you can spare the time and the money. If, however, you have only four years at your command, do not waste one of them in grinding up subjects which have merely indirect bearing on the main object of your lives; but if you can spare the extra year, seek, at the cost of considerable taxation, the position which every practitioner of medicine, who is not a graduate of a university, yearns for.

And there is yet another reason why I would advise you not to hurry through your professional education, for by so doing you must neglect a matter of the utmost importance, and that is your physical education. Over-taxation of the undeveloped animal (if you will excuse the expression) is a great mistake; all work and no play makes Jack a stupid boy, and so run a long string of wise saws and modern instances. I confess I think athleticism has a tendency to assert itself too strongly in the present system of education; but when I look back on the history of the large majority of the working doctors I have known, I find that they have not neglected those sports and pastimes which not only serve to set the frame, but afford in their prosecution a true recreation. Many of your most eminent teachers have been and are eminent athletes, distinguished in the foot-ball field, at the wicket, the archery-ground, and the golfcourse, and I am sure there is not one of these would say that time had been lost in such play. You will make no worse practitioners for being able to boast that you kicked such-and-such a goal, took so many wickets in a well-remembered match, can fill your basket or your bag. *Carpe diem* is not an altogether unphilosophical axiom; there is no reason why the student should not thoroughly enjoy the golden time which so soon passes away, and all the more so as in prosecuting a sport he braces his frame for the exercise of a most arduous and exacting profession.

And now, gentlemen, I wish, in conclusion, to offer you a second piece of advice, the outcome of the retrospect my mind has been subjected to in the preparation of this address—and that is, to study with a doubting mind, and never to accept as ultimate the opinions and statements of your teachers. Of course there are certain facts laid before you which must be accepted, such as that such and such a muscle has its origin and insertion in such and such bones, but you are not called on to believe that the statements as to the composition of muscle are absolutely determined, or that its qualities and methods of action are fully ascertained. I say, receive no statement in which theory of action, whether it be chemical, physical, physiological, or pathological, is involved, as more than provisional. This position is not only not disrespectful to your teachers, but it is the very one which they desire, or ought to desire, you to maintain. Every lecturer must of necessity be didactic, but only to the extent that, having studied his subject by the light of science and by his own special light, he believes the statement he gives you to contain the utmost that is known about a given subject up to the present time. He gives you his own opinion and the opinions of others, without desiring you to accept them as ultimately determined facts. The best student is not the man who swallows indiscriminately every statement made by a teacher, and who can glibly run them off in the examination-room—he may be the best examinee, but not the best examiner of disease; and this is especially true in matters of treatment. It is fit and proper for a teacher to give you the results of his experience as to the treatment of disease; but looking back, as I can, for some five-and-twenty years, I find the faith of that time is the heresy of to-day. Operations, which we were warned most strenuously not to undertake, are now daily performed with brilliant success. If Lister and Chassaignac and Esmarch and Langenbeck had remained satisfied with the teaching of their time, the pain and misery of operative procedures would have remained now as then; for, although anæsthetics had robbed them of the agony of the knife, there still remained the swollen tense stump, the tender wound, and the dreadful anticipation and reality of the subsequent dressings. Alison was then the strong advocate of the "pouring-in" system of treatment of fevers, alcohol was administered in so-called heroic doses, and although bleeding had gone out, depletion by other methods was the general practice. The blind acceptance of statements conduces to the adoption of a routine system of practice, than which nothing can be more enervating to the mind of the practitioner, or more non-conducive to the advance of his science. Acquire the opinions of authorities, but think out for yourselves how far you can accept them. Many a student has made his mark before he left his school by observations founded on doubts. Pettigrew, Rutherford, Fraser, Sanders, amongst men that you know, and many others whom you only know by name, had gained that name before they left their *alma mater*. Whether this is to be the result to any of you I know not, but this I know, that doubt is the best condition of mind for the student of science to maintain.

Facts and theories you must acquire; they will be demanded of you by your examiners: and here I beg of you not to be too hard in your own minds on your examiners; they have a very serious duty to perform to the public and to you, not only as candidates, but as members of the general public. Believe me they have the most earnest desire to pass men, and it is with the deepest regret that they pluck unsatisfactory examinees: this is never done without most serious consideration, without due regard to the interests of the body they represent, the candidate, and the public. We hear now and then stories of men being rejected whom all thought were sure to pass, and this on account of the fault, not of the candidate, but of the examiner, who took them over some subject unfairly, or put catch questions. Now, gentlemen, this is all nonsense. After some considerable experience, I have never known a man to be rejected who did not thoroughly deserve it. Examiners are much more apt to fail on the side of leniency; they only require intelligent answers to questions suited to test the knowledge of the student as regards presently accepted facts and theories; no man is plucked on remote questions of detail. I admit we dislike and can easily recognise the candidate who has merely ground up his subjects for the purpose of passing, and who can only answer questions in a loose and disjointed manner: that man is pretty sure to go to the wall. To avoid rejection you must not merely put on a spurt for the last few weeks—cram will not do it. Three or four hours a day of steady work over the whole session *will* do it, and I can assure you we are quite able to diagnose each of your cases in five minutes, and the chances of the steady average reading-man are infinitely greater than those of the most brilliant crammer. It is the greatest kindness to an imperfectly prepared man to pluck him; he does not lose, he gains, time by being relegated to his studies for some three or six months more.

And now, in the name of the staff of this School, I bid you all welcome and God's speed. You are studying a profession in the exercise of which your energies will be sorely taxed; it is one which entails most serious responsibilities, anxieties, and hard work: it is one which does not offer many great prizes; on the other hand, it is one by which you can always live, and by which you can live respectably and respected. It is not like other learned professions which offer a few prizes and many blanks; and further, it is one which in its exercise places no strain upon the conscience. I have never known the upright medical man begging his bread. He may have many a hard struggle, many a sore fight; it may be years before he meets his full reward—a reward which may consist in riches *and* the respect of his fellow-citizens, or in a mere competency *plus* respect; but the latter—the better reward—is sure to be his if he works his work thoroughly. If you fail, it is by your own fault, and this cannot be said of other professions. I have several sons, and would gladly see them all doctors of medicine, knowing that the medical profession provides a competency and a self-satisfaction to him who does his duty.

We will all meet again to-morrow on a most important occasion, the opening of the New Infirmary—a noble monument of Scottish benevolence. Proud as we will all be, the older hands amongst us will experience twinges of regret at seeing the old place empty and deserted—tenanted only by the memories of the past. For there we spent many happy days, although surrounded by disease—happy in the fulfilment of duty and in the study of a noble profession; there were many life-long friendships made, there worked the heroes of our youth, there many made their fame. Let us hope that in the new hospital as many victories over disease and death will be gained, that as many and more onward strides will then be taken in the science of medicine; but sure am I that each of us who has worked in the old place will, as he glances down Infirmary Street, say with Gœthe as he reviewed his past, *Manche liebe Schatten steigen auf.*

## ARTICLE II.—*Elephantiasis Arabum.* By EDWARD HENDERSON, M.D., F.R.C.S. Edin.

(*Read before the Medico-Chirurgical Society of Edinburgh*, 17*th June* 1879.)

THE disease known as elephantiasis arabum is, as you are doubtless aware, endemic among the natives in China. As to its exact localization I am unable to give any very definite information, but I believe it to be widely distributed throughout the empire. I have myself seen cases in Ningpo, Shanghai, and Chefoo, and have heard or read of them as occurring in Kiukiang, Hankow, Swatow, Amoy, and Canton. Regarding Tientsin and Pekin I feel less certain; but, if I am not mistaken, the disease is known also in these places or in their neighbourhoods.

During the ten years which I have spent in practice in Shanghai I have had many opportunities of observing and treating this disease; and to-night I am to have the honour of laying before you some of the results of this experience.

The first thing which strikes me as worth recording is the fact, that while big legs are so common in Shanghai that you can scarcely walk far in the public streets without encountering among the working coolies a more or less well-marked example, yet elephantiasis of the scrotum is rarely encountered in the practice of the native hospitals. During my residence in the settlement at least four surgeons have been at all times ready and even anxious to operate in such cases, all being, besides, more or less actively engaged in practice among the natives, and yet the number of operations has been very small indeed. Compared with the surgeons who have practised at Amoy, the surgeons of Shanghai have very few opportunities of treating the disease in this special and perhaps most striking form. In Hebra's treatise on *Diseases of the Skin* (the article is by Moriz Kaposi) it is stated "that the lower extremity is the most frequent seat of the disease." But I gather from a lecture recently delivered by Sir Joseph Fayrer at the Charing Cross Hospital, that in India, or at least in that part of India where Sir Joseph practised, the genital organs are the parts which most commonly suffer, the lecturer's explanation being, in his own words:—"The greater tendency to hypertrophy in the genital organs, it would seem, is coincident with the greater supply of lymphatics to these than to other tissues." Be this as it may, in Shanghai and its neighbourhood the lower limbs are the parts almost exclusively affected, and even in Amoy Dr Manson says of the disease that "it occurs most frequently in the legs, although often found to attack the scrotum either alone or along with the lower extremities." I can myself recall one case in which the hypertrophy was for many years confined to the legs and thighs, but eventually extended to the scrotum; and I learn that the same sequence has been observed in a case recently under Mr Annandale's care in the hospital here.

Moderate enlargement of the legs does not seem to be associated with any marked derangement of the general health, and affects the power of locomotion but slightly. Moreover, in a large number of cases the disease appears to be very stationary, lasting pretty well during the lifetime of the individual without apparently causing much inconvenience. One often encounters strong, healthy-looking coolies actively carrying heavy weights, such as tea-chests, bales of shirtings, chairs, and the like, with one and occasionally both legs distinctly enlarged; and some years ago a travelling companion of mine in Japan was drawn in a light two-wheeled carriage some eight or ten miles, at a pace which professional pedestrians might envy, by two coolies, one of whom had moderate but quite characteristic hypertrophy of the right foot and ankle.

As a result, foreign surgeons are seldom consulted in these cases unless the hypertrophy is very considerable, or until, the skin having given way, an ulcer has formed.

Ulceration is a serious complication. The ankle is commonly the first part to suffer; and indeed I have never seen anything more serious than a superficial abrasion above the middle of the calf. Eczematous eruptions are common on the diseased limbs, and the ulcerative process seems not unfrequently to begin in the abraded surface of the moist stage of this disease. The ulcers often cover a large surface, and may extend deeply into the hypertrophied tissues; they discharge profusely, and they are but little amenable to treatment. When they are extensive and seated on largely hypertrophied limbs, I know of nothing short of amputation which is likely to do much good. In slighter cases, uniform support by bandaging or strapping should be part of the local treatment.

I show you now the photograph of a Shanghai coolie who came to one of the native hospitals in 1870, suffering from extensive ulceration of a foot and ankle in connexion with elephantiasis. I have seldom seen a more offensive and ill-conditioned sore than this man exhibited on admission. He was not under my care, but the gentleman who had charge of the case, finding all treatment useless, and seeing that the life of his patient was threatened by the profuse and septic discharges from the raw surface, wisely decided to amputate. Along with another surgeon, I was present and assisted at the operation. Both limbs were markedly affected by the disease; the hypertrophy extending on the right side—the side on which the ulcer was seated—to the skin covering the lower third of the thigh. We all felt that the patient's prospects were not very good, for we argued that even if the operation succeeded in arresting the disease in the right thigh, there was still probably a bad future for the left leg, which we naturally feared might develop the disease as rapidly as its fellow. I have said that the hypertrophy on the right side extended to the thigh, and the question of amputation through the diseased tissues was then first presented to me. The amputation was made through the condyles of the femur. The flaps sloughed (though not, I believe, because fashioned out of the hypertrophied skin), and at a later period a portion of the exposed end of the bone died. At a time when the patient was much reduced by the suppuration of the amputation wound and by confinement in the hospital, I removed the diseased bone, and the result, an unsightly but painless stump, you see in the photograph. This second operation still left the line of the amputation distinctly below the original limits of enlargement, but the disease, which had greatly disappeared from the skin when I removed the piece of bone, never progressed further in the stump, and, much to my surprise, when the man was again able to go about, the left leg was found to be almost quite reduced to its normal size; and, what is more remarkable, that improvement—amounting practically to a cure—remains permanent up to the present time. The patient has walked pretty actively about the streets of Shanghai for some years past with a wooden leg. The photograph was taken in 1870.

You are aware that surgeons who have seen much of elephantiasis advise that, as a rule, the hypertrophied tissues should be entirely removed. The point has perhaps not yet been fully discussed in connexion with amputations of the extremities, but Sir Joseph Fayrer, in speaking of the operation on scrotal tumours, on the occasion already referred to, says, "No attempt should be made to preserve flaps of integuments. It is unnecessary, and almost certain to be followed by recurrence of the disease." I shall again refer to this when I come to the discussion of the scrotal affection, but in the meantime I wish to add another and perhaps more striking case of leg amputation through diseased tissues to the one I have already given.

In the end of 1873 or beginning of 1874, Dr Little, the surgeon to the Shanghai General Hospital, asked me to assist him in removing the lower limb of a young woman, which was enormously hypertrophied, and, if I remember rightly, also extensively ulcerated. I gave Dr Little the history of the case which I have just narrated, and although the lower third of his patient's thigh was seriously implicated, he decided to amputate at the seat of election below the knee. In spite of the ability of the operator, I have seldom seen a more ungainly-looking stump than was produced at first in this case by amputation through the largely hypertrophied tissues. The test seemed certainly crucial. The flaps in this case did not slough, and the wound healed naturally, while at the same time the tissues, both in the stump and above it, shrank rapidly and considerably. Last year, shortly before I left China, I asked Dr Little how his patient was, and he told me that the stump was a good one, and had given no further trouble. The girl was in good health. He had seen her a short time before my question was put.

It will not, of course, do to draw conclusions too hastily from such scanty data; but the point is one of considerable importance in the treatment of the disease as it affects the lower limbs; and if my limited experience can be at all generally confirmed, it is plain that we are not by any means compelled to take the limits of manifest hypertrophy as the lowest line through which amputations of the extremities should be performed, but have, indeed, a tolerably wide choice in selecting the point at which to operate.

I have had no experience of the benefit to be derived in this disease from drugs administered by the mouth or applied locally. Change of air, as you know, is said to be of great value, and it is only reasonable to suppose that good will result if we remove our patients from the malarious surroundings with which the disease appears to be so constantly connected. Unfortunately, in practice among the poorer class of natives, who suffer chiefly, it is generally out of our power to fulfil this last indication.

Pressure by bandaging, combined with rest in the horizontal position and elevation of the limb, is a method of treatment long practised and certain to recommend itself to surgeons of any experience. But, so far as I know, it must be only very exceptionally that cures have been effected in this way; indeed, I am convinced that in all save perhaps the very slightest manifestations a degree of improvement can be maintained, or even a mere arrest of progress effected, only by *continuing* to give support to the affected limb. In dealing with the coolie class in the East this is practically impossible; and so we find that the good done in the hospital lasts but a short time, and the result of the treatment is in the end unsatisfactory. The proper, and indeed I think at the present day the only, method of applying pressure which a surgeon would employ is by an elastic bandage. In large brawny swellings, such as are represented in Diagrams I. and III., this may be applied firmly, and may be kept in position almost continuously, even for days together, without fear of injuriously affecting the circulation. The fact is that the hypertrophied tissues—even when the fluid causing the œdema is driven out or reabsorbed—offer considerable resistance to the force applied, and defend the vessels in the interior of the limb from pressure. The bandage—a plain indiarubber one should be preferred, for the sake of strength and cleanliness—must, of course, be evenly applied, and to secure this some padding of the hollows is occasionally needed. A reference to Diagram I., which is enlarged from a photograph, will make the necessity of this apparent. Any injury to the skin must, of course, be carefully avoided. Superficial abrasions (which will improve under the treatment) must be defended by appropriate dressing. It might be unwise, and would, indeed, not always be possible, to make use of pressure during a period of exacerbation, when the limb is hot, painful, and unusually engorged, while at the same time the patient's temperature is raised. You are aware that in well-marked cases of elephantiasis such exacerbations are of frequent occurrence, and have led to internal medication by the so-called "antiperiodics." In judging of the effect of pressure on considerable enlargements it is advisable to take the average of several measurements,—the œdema, in spite of careful bandaging, being apt, at first, to shift from one situation to another. I show now four photographs which illustrate the pressure treatment very well, along with two other points to which I shall presently direct attention. These photographs are all taken from one patient; A 1 and 2 representing from different points of view his condition on admission to hospital, B 1 and 2 being corresponding views of his state on leaving hospital. Diagram I. is a rough copy of the first photograph. The case is of sufficient importance to warrant my giving its history a little in detail.

The patient's name is Nue-Yuet-tsung. He is twenty years of age, but looks younger. He appears to be, and is, a healthy lad. He comes from May-seang, a village situated some fifteen or twenty miles from Shanghai, many of the inhabitants of which, he says, suffer from the same disease of the legs as himself. About ten years ago he had a fever which confined him to bed for six or seven weeks. It was a continued fever, so far as can be gathered from his account of the illness. During his convalescence he first noticed a swelling in the right groin. This was tender to touch, and followed shortly by enlargement of the leg, which has been slowly progressive, extending latterly to the thigh. He states positively, in spite of the account he has given of the inhabitants of his native village, that neither his parents nor grandparents, nor any of his relations, have ever suffered from the same or a similar disease. He is a shopman, but has not been able lately to stand much behind the counter. His leg is not painful, but feels heavy, and is a drag upon him. The skin of the affected limb, and to some extent the skin of the left leg also, is roughened and scaly. He complains of tenderness in the right groin over some enlarged lymphatics there. The lower border of the projection which represents the calf in the right leg threatens to ulcerate, having already given way at one or two small points, from which a thin sero-sanguinolent fluid trickles when the limb is moved or hangs down. The scrotum is not affected. You will notice, also, that in the first photograph (the front view) the lymphatic glands in the groin of the sound limb are considerably enlarged, and that the foot on the affected side is of nearly normal dimensions. For the comparative measurements of the two limbs I must refer you to the card suspended on the screen. You will there see that the difference (between the two legs) on the sums of three measurements, taken at different parts of the limb, is 22·5 inches. I decided to make a fair trial of the pressure treatment in this case. The bandage—a broad, strong, plain indiarubber "Esmarch"—was applied on the morning of the 7th of June 1876, the patient lying in bed with the limb elevated on a cushion. In an hour the circumference of the calf (the only measurement taken on that occasion) had diminished 3·9 inches, the skin having quite lost its tense, brawny feeling. During the hour the patient was obliged to pass water three times, voiding on each occasion a large quantity of nearly colourless urine. This diuretic action of the bandage being altogether unexpected, the total quantity of urine passed was not at this time ascertained. I found subsequently that the lad passed habitually a large quantity of water of low specific gravity, but that this was constantly increased and the density lowered during the first hours of bandaging, provided always that the bandage was applied only after an interval sufficient to allow of the complete, or nearly complete, return of the swelling. After the 29th of June the bandage was kept on almost continuously, and when the patient left the hospital, on the 9th of August, the limb was found to have lost fully five inches in average diameter, his condition being as represented in photographs A 2 and B 2. In the second week of July there was one of those periods of exacerbation to which I have already referred as characteristic of the disease, when, in spite of bandaging, the limb gained considerably in size. The urine was carefully measured during the whole of the last period of the treatment. On the 29th of June 104 ounces were passed, on the 30th 98 ounces, and on the 1st of July 120 ounces. During the rest of the time—that is, till the 9th of August—the daily average was 78·43 ounces, the largest quantity passed in one day being 95 ounces, the smallest 45 ounces. The specific gravity was always low. There was no albumen at any time. I have now to tell you—what I have already prepared you to hear—that the improvement effected in this case, although so satisfactory at the time, proved to be of very short duration. My patient returned to his employment immediately after leaving the hospital; and the use of the bandage being discontinued from that date, his condition within a month was as bad as or possibly worse than it had been when he first came under my care.

Unsatisfactory as such a result was, and unsatisfactory as such treatment will, in similar cases, commonly prove, I am by no means of opinion that the treatment by pressure should be dismissed as useless. Under certain conditions, as my first case shows, a lasting improvement, amounting practically to a cure, may be obtained; and elastic pressure, by removing œdema, if it effect nothing else, must be regarded as of considerable value in at least favouring such a result. It is claimed for Hebra "that he has had more, or at least as much, success by bandaging as other physicians who adopted much more severe and, for the most part, hazardous or fatal methods of procedure;" and it would appear that at the time Kaposi's article was written Hebra had made use of cotton bandages only. Some time ago I had a Parsee gentleman under my care in Shanghai who suffered from moderate enlargement of one leg. For this he wore constantly a strong elastic stocking, and, although periods of exacerbation from time to time recurred, the swelling never showed any permanent increase. In the photographs just shown I have already drawn attention to the fact that the swelling, although so considerable in the leg and thigh, extended but slightly to the foot; and I have noticed this in one or two other cases as a well-marked peculiarity. I have always regarded it as in great measure due to the firm support given by the shoe, and at present I know of no better explanation. My patient wore shoes habitually. Had he been in a lower rank of life, and accustomed to dispense with such coverings, the foot might, I imagine, have suffered like the rest of the limb. Kaposi says that in attacking the œdema "we combat the proximate cause of the malady," and his opinion seems based on sound pathological reasoning. The diagram No. II. is taken from the photograph on page 8 of the album. It represents the usual condition of the foot in the severer forms of the disease. The sufferer in this case belonged to the coolie class, and was probably accustomed to work barefooted. The photograph was taken by Major Watson of Ningpo, who kindly sent it to me some years ago as representing the worst case of the kind he had met with in China.

Before laying these photographs aside, notice again the considerable enlargement of the lymphatic glands in the groin of the sound limb. Those on the right side were also considerably enlarged, but they are concealed by the hypertrophied tissues which overlie them. In a disease so closely connected with the lymphatic system it is curious that such decided glandular enlargements should exist in both groins while the hypertrophy remains strictly limited to one extremity. But the sequence of events in these cases has scarcely yet been sufficiently made out. In the case under Mr Annandale's care to which I have already referred, I observed the same phenomenon—considerable enlargement of the lymphatics in both groins with elephantoid swelling developed in the right leg only. In Mr Annandale's case there was, however, some œdema of the left foot.

In the history of my pressure case I made it a point of special mention that the lad was, so far as he knew, the first member of his family to suffer from the disease; and I did so because, as you are probably aware, elephantiasis has been regarded by some authorities as a hereditary complaint. Before such a doctrine could be admitted as proved, it would be necessary to show, not merely that the disease ran occasionally in families, but that it descended from parents to children *even when the latter were removed* from the conditions and surroundings in which their parents developed the malady. In connexion, however, with this point, I wish now to show you a photograph on the first page of the album, which I regard as perhaps the most curious in my collection.

These three males represented in this photograph stand to one another in the relationship of grandfather, father, and son, and all, as you see, suffer from elephantiasis of one or both extremities. They are natives of the village of Chüsoh, which lies about twenty miles to the west of Shanghai. The disease is said to be remarkably prevalent in this village; according to the son, who was for some time under my care in Shanghai, nearly one-half of the inhabitants are affected. In the grandfather, who is 76 years of age, only one leg (the left) is diseased: the apparent swelling and tuberculation of the right calf is due simply to a varicose condition of the veins. In his case the hypertrophy is inconsiderable, but it has probably diminished in consequence of the senile atrophy which his general appearance indicates. The father suffers from moderate enlargement of both legs. He is fifty years old, and looks, as he is, a strong, healthy man. The son, who is only 18, has considerable enlargement of both legs, but appears otherwise in good health. When he first came under my care, in 1870, I tried rest with pressure by an ordinary bandage, and also some special internal medication. When I found that he was not benefited by these measures I had recourse to ligature of the femoral artery, which I tied in the upper part of the right thigh. No permanent good resulted from this procedure. I may state here that I have never again performed or recommended this operation, which I regard, with many other surgeons, as hazardous, and not likely to result in permanent improvement. After the lad left Shanghai in 1870 I heard nothing of him or his parents till October of 1877, when, at my request, he again paid the hospital a visit. He told me that his father had died in the beginning of the year of some chronic complaint, after an illness of six months' duration, attended with abdominal pain. His grandfather had also died a year before his father, and apparently of old age. He, the son, looked a well-grown, healthy young man, but the lower limbs, which he said were better, appeared to me in a worse condition than before. The scrotum, which had been free from disease when I first saw him, was now affected by that peculiar form of elephantiasis in which the superficial lymphatics appear as small semi-transparent swellings scattered over the surface of the thickened and roughened skin—the varicose or nævoid form of some writers, the "lymph scrotum" of Manson. The old scar of the incision which I had made to reach the artery in the right groin presented a very remarkable appearance, being deeply buried out of sight between two opposing walls of the hypertrophied tissues. From this circumstance I judged that the disease had extended in an upward direction, for I could remember that the tissues divided at the operation were of nearly normal thickness.

Recurring to the question of hereditary transmission, I am not myself at present prepared to admit more than that in this—as indeed in most other diseases—a predisposition is transmitted by parents to their children.

I find it stated by Kaposi "that both lower limbs are scarcely ever affected," but this is certainly not true of the disease as it occurs in China. I have myself seen many examples of double elephantiasis, and have been able to exhibit to-night the photographs of four individuals in whom both legs are diseased. The right leg is the one which commonly suffers, and when both limbs are affected the disease is usually best developed on the right side. The grandfather in the Chüsoh group is an exception to this general rule.

(*To be continued.*)

## ARTICLE III.—*Personal Reminiscences of the International Medical Congress at Amsterdam.* By JAMES PATTERSON CASSELLS, M.D., M.R.C.S. Lond.; Fellow of the Faculty of Physicians and Surgeons; Surgeon to the Glasgow Dispensary for Diseases of the Ear; Aural Surgeon to the Glasgow Royal Infirmary, and Lecturer on Aural Surgery in the Royal Infirmary School of Medicine; Membre-Correspondant de la Société royale des Sciences Médicales et Naturelles de Brucelles; Reporter on the question of "Ear Disease in its Relation to Life Assurance" to the Sixth Congrès Périodique International des Sciences Medicales at Amsterdam in September 1879; Honorary Secretary of the Otological Subsection of the British Medical Association at Cork in 1879.

ON the 6th of September I arrived in Amsterdam—the northern Venice—to take part officially in the above-named Congress. Proceeding the same evening to the "Zeemanshoop," which is a club of 600 members of the *élite* of the mercantile and shipping class of Amsterdam, there to inscribe my name in the official register of the meeting, Professor Stokvis received me with much courtesy and some little humour, remarking that he was obliged to *extract* ten florins from me as the price of my ticket of membership, "because," as he naïvely said, "we Dutchmen are so poor that we cannot afford to admit free members." We (my eldest son and self) then inscribed our names for the various excursions and fêtes, much after the custom which obtains at the British Medical Association meetings, and were much pleased with the courtesy shown us by one of the assistants, Mr Thyssen, who, throughout all the meetings and excursions, proved an active and efficient member of the Committee of Organization of the Congress. In the evening there was a reunion of the members of the Congress in the *grande salle* of the Zoological Gardens (Artis). Next day, Sunday, at two o'clock, the *Séance d'Overture* took place under the presidency of Professor Donders of Utrecht, the President of the Congress, in the *grande salle du parc*, and was attended by most of the *élite* of Amsterdam and neighbourhood, both ladies and gentlemen. The hall itself was tastefully and artistically decorated with the colours and flags of all the nations represented at the Congress, and with shields on which were inscribed the names of the cities in which former meetings of the Congress had been held. The report of the General Secretary, Dr Guye, was read, and in it were set forth all the labours that had been gone through up to the time of the opening of the present Congress. (I may here remark that the whole subsequent success of the Congress was mainly, if not entirely, due to the very careful preparations which Dr Guye had made previously for the conduct of the Congress and the comfort of its members. In saying this, it is indeed faint praise to give this gentleman for his self-sacrificing labours.) After the reading of the general report had been concluded, and when the *bureau définitif* had been nominated, among which were included all foreign delegates from other medical associations to the Congress, conspicuous among them being Professor Lister, Ernest Hart, and Professor Sayre of New York, the President of the American Medical Association, President Donders ascended the tribune and delivered his most remarkable address, which ranged over the whole field of science, past and present, reviewing also the important work to be done in each of the sections of the meeting now opened, among others mentioning the subject of "Ear Disease and Life Assurance" as one of the most important questions before the Congress, from a social point of view, to be discussed in the Otological section. As this was the question upon which the President and Committee had invited me to report, I naturally felt much pleased to learn that my subject was of so much importance as to merit mention in the Presidential address. The address itself was characterized by rare elegance of diction, and was delivered by one admitted by all to be an orator; and when I say this, the nature of the treat that was presented to us may be imagined, even by those who had not the pleasure of listening to the natural eloquence of the speaker. At half-past eight in the evening, the Burgomaster and the Corporation gave an official reception to the members of the Congress in the Hotel de Ville.

On Monday, 8th September, the work of the sections, nine in number,[1] commenced, lasting from 9 A.M. till 1 P.M. In all the sections the same form was gone through of nominating a *bureau définitif* before the commencement of the proceedings, and thereafter the papers were read in the order in which they had been previously arranged. In the section of Otology, to which my attention was more directly devoted, there was a good assemblage of members. We had Ogston (Aberdeen), Turnbull (Philadelphia), Magnus, Guye, Giampietro, Menière, son of the celebrated Menière, Professor Doyer (Leyden), Voltolini (Breslau), Dr Van Hoek, the president of the section, Dr Delstanche of Brussels, Dr Land, the Secretary, Dr Schüster (Aix-la-Chapelle). Ernest Hart also visited the section, and several others. The reporters were Professor Doyer on "Adenoid Tumours of the Naso-Pharynx," Dr Guye on "Menière's Disease," Dr Magnus on the "Different Methods of Determining the Acuteness of the Hearing," and myself on "Ear-Disease in relation to Life Assurance." Although my *mémoire* was last on the list, it was decided that it should be read first; and it was gratifying to find that the conclusions of the report were favourably discussed, and to know that they were afterwards adopted by the general assembly of the Congress. I read my *mémoire* in French before the section, and when I began to speak of my own labours in the matter, I handed it over to my friend Dr Delstanche, who read the rest of it for me. Dr Turnbull read in English a most excellent little paper on "Tinnitus Aurium." The reports by Drs Guye, Doyer, and Magnus were read on the following days, and we had several interesting demonstrations from the members of new instruments, especially interesting being those of Voltolini, Doyer, and Delstanche. Dr Menière also gave us a demonstration on the removal of foreign bodies from the middle ear. Altogether the work done in the Otological Section was most substantial and praiseworthy. I forgot to mention that Professor Voltolini and Dr Delstanche were unanimously elected vice-presidents of the section. In the fifth section—Public Medicine—on Monday, Dr A. H. Allbutt of Leeds read a paper on "Infant Mortality and Premature Death."

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[1] There was a tenth section, viz., the Museum. This excellent exhibition of instruments and medical appliances was organized in great part and carried out by the well-known Dr Gori. All the celebrated continental Fabricants were exhibitors, and there were also numerous private exhibits of instruments by medical men, members of the Congress; among the latter I may especially note the beautiful and original physiological instruments of Dr Binnendyk.

As regards the work done in the other sections I can speak only from hearsay, and that went to show that, although nothing very new or very startling had been announced, the work done was of a thorough and exhaustive character; and, so far as I could judge, this was borne out by the reports of the sectional work that were read in the general assembly of the Congress in the *Grande Salle* each day after the conclusion of the labours of the sections.

At the general assembly on Monday, Professor Becker of Heidelberg gave an address on the "Relation of Eye-Diseases to the Localization of Diseases of the Brain." Dr Chervin (Paris), at the same meeting, gave an address on "Stuttering and its Treatment." In the evening, in the *Grande Salle* of the "Felix Meritis," Professor Marey of Paris delivered a discourse, to which the ladies were admitted, on the part taken by different nations in the discovery of the circulation of the blood. Thereafter the Society Hereeniging gave a musical soirée, at which the beauty and fashion of Amsterdam were present, and which was a great success.

On Tuesday, 9th September, the work of the general sections proceeded as usual. In the Otological section, Dr Guye (the general secretary of the Congress) found time to read a masterly and exhaustive "Report" on the so-called "Menière's disease." This paper was well discussed by the members of the section; with general acclamations it was pronounced to be a most excellent *Mémoir*. It will appear shortly in the *British Medical Journal*, translated *in extenso* by its talented author. In the third section—Accouchements and Gynecology—on Tuesday, Lawson Tait of Birmingham gave a demonstration of his gynecological instruments; and on the same day, in the ninth Pharmacological section, Dr Thomas R. Fraser of Edinburgh reported upon the question of a "Universal Pharmacopœia." In the general assembly of the Congress, after the sectional reports of the day had been read by the respective secretaries, Professor Lister gave a most excellent address in French on the antiseptic treatment of wounds, dealing in the latter part of it with the opinions of the opponents of his system of treatment. But it is of the ovation which greeted the learned Professor as he ascended the tribune that I would speak. Such waving of hats and handkerchiefs, stamping of feet, umbrellas, and sticks, hurrahing and "hoching," bravoing from hundreds of tongues, I never heard before in all my experience. Midst all this honest and heartfelt excitement Professor Lister stood with a figure and face as emotionless as that of a statue, and as calm and beautiful in its repose. President Donders, who had been standing during this exciting scene, called for silence, and when at last the *furore* of excitement had subsided, he approached Professor Lister, and, taking him by the hand, said, "Professor Lister, we give you not only our own homage, but the homage of the nations." This was the signal for a renewal of the ovation, which lasted for some time.

After Lister's address came Professor Van Geuss of Amsterdam "On the Value of the Doctrine of Naegele in the Interpretation of the Facts having Relation to the Propagation of the Miasmatic Epidemics." In the evening the members of Committee of Organization of the Congress, MM. Fabius, Guye, Hertz de Perrot, Stokvis, Tilanus, and Zeemen, gave a private dinner to the foreign reporters, at which I was present, seated on the right hand of Dr Guye, the general secretary. This dinner was held in the establishment of Zommerdyk Bassink, the "Véfour" of Amsterdam. Later on in the same day there was a *fête* given in Volke's Palace, or Palace of Industry, consisting of music and a vaudeville in one act, which represented the marriage of "Kloris en Roosje," in which the characters were dressed in the Dutch costumes of the early part of this century; this entertainment having been got up specially for the purpose of showing the correct costume of that period to the foreign visitors. The entertainment was enjoyed by all.

Wednesday, as usual, was an off-day at the Congress, and devoted to pleasuring. The excursion was to Ymuiden and the Zuyder Zee. Early in the day we were favoured with a storm of wind and a deluge of rain, which deterred many of the members from going to the Zuyder Zee, which was the first part of the voyage. On the return from the Zuyder Zee, as it still continued to be very stormy, many of the members left the steamer and remained behind. Others, like myself, more venturesome, remained aboard, and resumed the second part of our excursion, viz., the sail through the great Dutch canal into the North Sea at Ymuiden. This canal is somewhat longer than the Suez Canal, and broader and deeper. The sail was most enjoyable, for the day broke up and continued fine from soon after our departure from Amsterdam. At the North-Sea end of the canal we changed from the small canal steamer into a large sea-going steamer, which took us out between sea walls a distance of six miles to the bar of the new harbour, where we had a good toss on the waves, where some of our members lost their hats as well as their spectacles, and others the contents of their stomachs. The sea walls are a marvel of marine engineering, and have all been built in spite of obstacles that would have daunted less brave hearts than are possessed by these busy Dutch bodies. The return sail was most pleasant, and the dinner in the evening of the members in the Grande Salle of the "Artis" was a fit ending to the pleasures of the day.

The work of the sections was resumed on Thursday as usual. In the Otological section on this day, Dr Magnus of Königsberg read a most elaborate paper on the "Different Methods of Determining the Acuteness of the Hearing." He decides that the ordinary pocket watch is the most practical as well as the most convenient measure of the hearing for single and simple tones.

I had afterwards much pleasure in the company and conversation of so lovable and unassuming a man as I found Dr Magnus to be.

In the general assembly, Professor Verneuil of Paris discoursed on the "Indications and Contra-indications for Operations." Dr Drysdale of London afterwards talked on his old subject, "The Effect of the Regulation of Prostitution on the Public Health." In the evening there was a conference with Virchow, in the Grande Salle of the "Felix Meritis," the subject being "Ancient Troy." His lecture was full of interest to archæologists; but undoubtedly, Virchow shines most when he speaks extemporaneously, as was evident in this lecture: when he spoke from notes, he was much less fluent in his expression. In the evening there was a musical soiree in the *parc.*

On Friday, in the section of Medicine, Mrs Dr Hoggan of London read a paper on "The relations of Carcinoma to the Lympathic System." In the section of Biology, Professor Donders reported on "The Systems of the Sensations of Colour;" the conclusions of his report have not, however, yet been published. In the same section Professor Marey reported on "The Determination of the Blood-Pressure in Man." In the Ophthalmological section, Snellen reported on "The Antiseptic Method in Eye Operations." His first conclusion is, that it is of the same value as in ordinary operations; but the employment of the Lister spray offers insurmountable difficulties in operations on the cornea, and is replaced with success by a current of air purified with carbolic acid. In the Otological section Professor Doyer reported on "The Adenoid Tumours of the Naso-Pharynx," and exhibited a new post-nasal douche of his own devising. The report was well illustrated by photographs of patients both before and after treatment, showing the results of his mode of treatment in the changed expressions of the faces. On this day, in the Elizabeth Hospital, Professors Lister and Sayre each gave practical demonstrations, presided over by Professor Tilanus. Lister's demonstration took place after Sayre's, and consisted in a display of his method of dressing wounds after removal of a necrosed bone and other operations. In the evening, Professor Sayre gave a dinner to the American delegates to the Congress, at which representatives of the Corporation of Amsterdam were present, as well as the American Consul. I had the honour to propose his health on behalf of the Scotchmen present at the Congress with all the honours, and the usual accompaniment of "He's a jolly good fellow;" at the conclusion of which many foreign members came and thanked me for my "Schottische jig!" (I may add here that Professor Sayre's father was a Scotchman, although the Professor is himself American born.) Later in the evening the medical men of Amsterdam gave the members a *fête* in the summer theatre of Van Leer. The nature of the entertainment may be judged of from the cast of the characters in a two-act drama, entitled "College Schnepper," by Dr Supinator Longus, "a species of drama in two acts, for the surgeons and natural historians of both hemispheres." The characters were—

HABAKKUK SCHNEPPER—A practitioner of the "old" school, and a "bleeder" as well as a "spouter."
PHARYNX, his Son—A ne'er-dae-weel.
LIQUIRITIA RADIX—His niece and ward.
DR SUCCUS—General practitioner of the "modern" school, in love with the old doctor's niece.
FRAU GLOTTIS—Hostess of the "Jolly Leech," in love with Pharynx.
PANCREAS—"Boots" in the "Jolly Leech."

There were also two tableaux represented, the one, "The Past and the Present," founded on the picture of Ambrose Paré dressing the wounded on the field of battle. In this case Paré's place was taken by a well-got-up "double" of Lister spraying his germ-destroying fluid on the wounds of the soldiers. The other, "The Future," was founded on Rembrandt's well-known picture, "The Anatomical Lesson;" but instead of men surrounding the lecturer, *she* was surrounded by women, the most prominent of whom was Mrs Dr Jacobs *in propria persona*, the first and only female medical graduate of the University of Amsterdam. Professor Lister's "double" was received with a volume of applause, to which Professor Lister, seated among the audience, bowed his acknowledgments. The ladies in "The Anatomical Lesson" were less boisterously applauded, but well received nevertheless.

On Saturday, in the Medical section, Professor Zavertal of Rome, brother of our distinguished local musician, read valuable papers on the "Syphilitic Affections of the Larynx," and on "Bronchial Asthma from the Point of View of its Pathological and Clinical History." Professor Macgillavry of Leyden, the scion of an old Scottish house, read a valuable report on the question of "Sympathetic Irido-choroiditis" in the section of Ophthalmology. Virchow, in the General Assembly, discoursed upon medical education, a subject on which he has already spoken at other Congresses. Its delivery was characterized by all the earnestness and fire of the veteran savant. In the evening the "farewell banquet" was given in the Grande Salle of the "Felix Meritis." Most of the members of the Congress were present; toasts and sentiments succeeded each other at a rate which beggars description; eternal friendships were vowed, adieus were spoken, cards exchanged; and I was made the bearer of a pleasant message from Virchow to the Editor of the *Glasgow Medical Journal*, complimenting him on the success that has attended his editorial efforts. During the earlier part of the evening I was seated between my friends Ernest Hart and Dr da Silva Amado of Lisbon, delegate to the Congress from Portugal; later on I seated myself between my two dear friends, Alexander Ogston and Laurence Turnbull, whose fame in their respective walks is world-wide. It was at the "farewell" that Dr Ogston made me acquainted with Dr Wollaston of Cannes, a grand-nephew of our celebrated Wollaston.

On ascending to an upper chamber, addresses were delivered of a farewell character by a messenger from the King of Holland; by Virchow to the younger students, urging them to perseverance in their studies, and to prosecute them with a pure heart and spirit, seeking for the truth alone, which he declared ought to be their life quest. While he was speaking, his otherwise plain features actually glowed with enthusiasm, as if his whole soul were shining in his face, giving to it a charm which it lacks in his more ordinary moods. A torch-light procession by the students of the three faculties of the University of Amsterdam, and the singing of the "Gaudeamus," brought a successful meeting to a successful close.

## ARTICLE IV.—*A Case of Bilharzia Hæmatobia.* By JOHN WORTABET, M.D., Beyrout.

C. D, aged 36, noticed the first symptoms of his disease in the winter of 1877–78. He was then travelling in Arabia, and was compelled at one time, on account of danger in leaving his room at nights, to retain his urine for a much longer period than usual. This gave rise to a very uncomfortable feeling about the region of the bladder and a little strangury; and these sensations, more or less aggravated, have continued to this date, April 1879.

In July 1878 he made a long journey in that country, and suffered much from heat, fatigue, bad water, and other hardships. When riding his camel, he often felt a severe pain in the bladder and an urgent desire to micturate. The process of voiding the urine was accompanied by pain; and he then observed his water to be red and bloody. Just before he set out on that journey he had a peculiar eruption in the form of a few pimples on the legs, thigh, and wrist, which opened and ulcerated, the ulcers being covered with scabs, some growing to the size of a shilling.

They had very much the appearance of Delhi boils. He left Djeddah at the end of July and went to India, when his urinary symptoms became considerably better under the use of linseed-tea. The ulcers healed about six months after their first appearance, and left dark scars which are still visible.

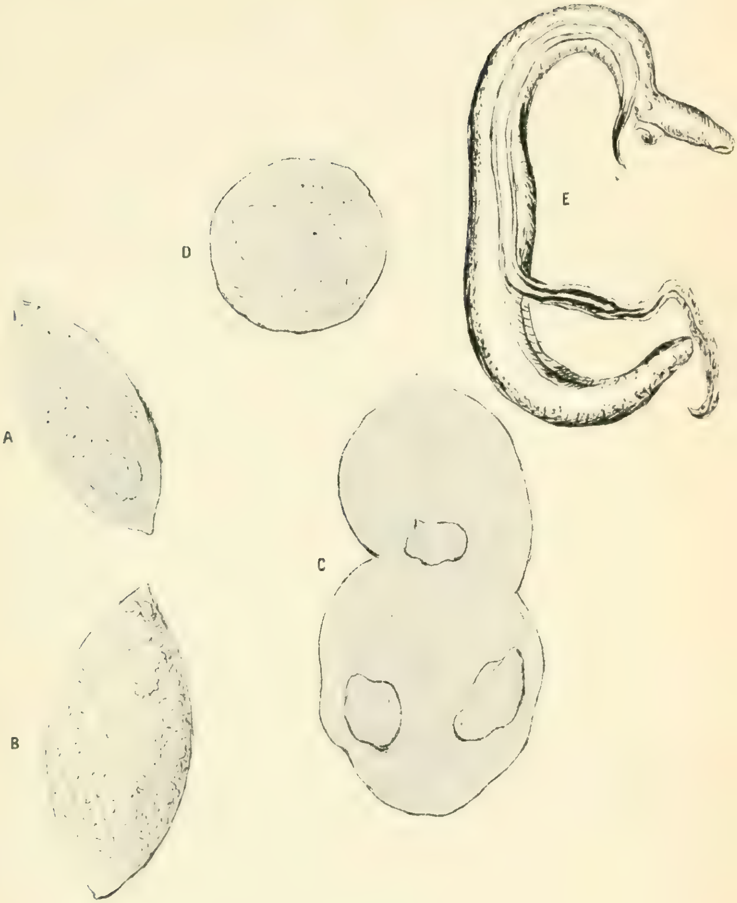
In India the urine was found by microscopic examination to contain blood and ova of the Bilharzia Hæmatobia, so named by Dr Cobbold in honour of Dr Bilharz of Cairo, who first discovered it.

He returned to England in the winter of that year, the main features of the disease being still unchanged. The urine was repeatedly examined by Dr John Harley, and found always to contain ova and free embryos of Bilharzia. The fully developed form of the parasite was not seen.

About the end of March he returned to Syria. He told me that he passed small clots of blood with his water, which he voided about six times in twenty-four hours, and always with more or less of heat and pain at the neck of the bladder toward the end of micturition. His general look was healthy and his appetite good, but he complained of a sense of fatigue, debility, and nervousness, which he thought might be accounted for by the severe privations and hardships of his travels in Arabia.

The history and symptoms of the case appeared to me to indicate a mild chronic cystitis, and the first examination of the urine revealed nothing more than blood and pus corpuscles with mucus and epithelium. It was from the patient himself, an educated Cambridge man, that my attention was called to the existence of Bilharzia in the *blood-clots*. In every subsequent examination the eggs of the animal were found entangled in the clot, and rarely free in the water. Of embryos I saw only two—one ciliated. The accompanying drawing was taken from the appearance of the ova and one free embryo under an $\frac{1}{8}$ of inch object-lens. The full-grown worm is copied from the book of Dr Cobbold.

The form of the egg is oblong, and pointed at the extremities, and measures about $\frac{1}{200}$ of an inch in length, and $\frac{1}{500}$ in breadth. The length of the fully developed worm is half of an inch or more (Cobbold). Dr John Harley found the eggs and ciliated embryos in the urine of patients from the Cape of Good Hope suffering from hæmaturia. The worm itself is found in the vesical, mesenteric, and portal veins. This entozoön is supposed to enter the body through drinking water in certain localities, and is said to give rise to diarrhœa and hæmaturia, according to its location, accompanied by great anæmia and prostration (Beale).



A, B, Egg. C, Escaped embryo, the cilia undeveloped. D, Unknown organism twice found. E, Fully developed worm, male and female, the latter partly enclosed within the gynocophoric canal.

## Article V.—*Case of Pleuro-Pneumonia, following a Fall in which the Chest was struck over the Site of a Pseudo-osseous Formation in the Pleura: Thrombosis: Sudden Death: A Clinical, Pathological, and Medico-legal Study.* By Sir John Rose Cormack, M.D. Edin.; M.D. Paris; Fellow of the Royal College of Physicians of London; Member of the Société Clinique of Paris; Physician to the Hertford British Hospital of Paris; Chevalier de la Légion d'Honneur.

(*Read before the Société Clinique de Paris, 27th November* 1879.)

The following history presents features of clinical, pathological, and medico-legal interest, as will be apparent on perusal of it, and the appended commentary.

Joseph Sparrow, an English stableman, aged fif y-three, a drunkard, was brought to the Hertford British Hospital at 5 p.m. on Thursday, 24th July 1879. As I happened then to be at the hospital, I at once granted him admission; and proceeded to examine him as soon as he was laid in bed. I recognised in him a man whom twice before I had had as an hospital patient—first with a bad stricture and perineal abscess, and then with pleurisy. On both occasions, he had alcoholic delirium. He looked very ill and haggard. In reply to my inquiries, he stated that since he was treated three years ago for stricture, he had had no recurrence of that malady; and that since he left the hospital, two years ago, after his attack of pleurisy, he had only once, for a few days, been prevented from following his employment, although he had had always "a shortness of wind." Upon the one occasion on which he broke down, he was only confined to his lodgings for about a week, with what he regarded as "a feverish cold;" but which, from his description of the symptoms, seems to have been a pleurisy. He admitted that though he had only once been obliged to discontinue work, he had had, from time to time, days of discomfort from shortness of breath and pain in the chest.

He attributed the illness for which he was admitted on 24th July 1879 to an injury received in a fall five days previously—that is to say, on the afternoon of Saturday, the 19th July. Till then, he assured me, he had been quite able to do his work, and had not been more ailing than usual. The woman who brought him to the hospital stated that he had not slept for three days and three nights, and that during the last night he had passed in his lodgings, he had been very noisy and delirious. With difficulty he had been kept in bed. When he came to the hospital, he had a somewhat confused and abstracted countenance; but he was quiet and respectful in manner, giving, moreover, clear replies to all my inquiries, furnishing (as was afterwards proved by the examination of other persons) a clear and circumstantial account of the accident to which he attributed his illness. His statement was to the following effect.

On Saturday, 19th July, when washing a horse, he stumbled, and fell with the whole weight of his body upon the sharp edge of a pail. He felt confused and stunned by the fall; but in a very few minutes that condition passed away, and in ten minutes from the time at which he fell, he resumed his work. He continued at his ordinary occupation for nearly two hours, during which time he suffered considerable and increasing pain in the place which had, in his fall, struck against the sharp edge of the water-pail. Soon afterwards, on arriving at his lodgings, the pain had become very acute; and he felt also much general discomfort. His breathing was then short; and at a particular place in the left side of the chest, he felt a sharp stabbing pain when he attempted to take a full inspiration, and also when he made the movements necessary in undressing. These symptoms rather ameliorated during the night, but towards morning they increased in severity. There was a constant pain in the lower part of the left side of the chest, which prevented full inspiration, and obliged him to give up the attempt to dress with a view to going, as usual, to the stables for his morning work. From that time he did not leave his bed, till he got up to go to the hospital. He felt that he could move and breathe more easily than on the morning of the 20th. When I questioned him regarding his reported delirium and sleeplessness, he said that when he shut his eyes and seemed to be falling asleep, he was suddenly roused up by some frightful vision which caused him to shake and tremble. On admission, his pulse was 80, tremulous and feeble. His respirations were 40, shallow, and occasionally jerking. His temperature was 39°·5 C. The tongue was parched and clammy. He said that he had not had a stool for three days, and that the urine was scanty.

On taking a front view of the naked chest and abdomen, it was at once evident that the muscular mechanism of breathing was carried on chiefly by the abdominal muscles and diaphragm. There was more mobility of the thoracic walls on the left than on the right side; but even on the left side, the mobility was very slight. On the anterior and left lateral aspects of the chest and abdomen, there were no marks of bruising; and no such marks were anywhere visible, except on the right shoulder and on the right side of the back, over and between the eighth and ninth ribs, within an irregularly square surface of from 3 to 3½ inches, where three greenish-yellow patches of ecchymosis were seen. The posterior border of the discoloured patch on the back extended to within an inch and a half of the spinous processes of the vertebral column. There was nothing to indicate that the bruise was caused by falling on, or being struck by, the edge of anything; the discoloration was of nearly uniform intensity, gradually becoming a little less towards the circumference. The patient cried out with pain when the dorsal bruise was pressed moderately with the points of the fingers; but, on the contrary, when pressure was applied firmly and equally by the whole hand, considerable relief was experienced. There was no swelling in the site of the dorsal bruise. No fracture of the ribs could be detected. Upon my stating this fact to the house-surgeon and others present at the examination, the patient said that he knew better, and insisted that one or more of his ribs were broken, alleging that with every breath he drew, he felt the splintered bone sticking him. This "sticking" he had felt, he said, from the first; for three days it had increased in intensity, but during the twelve hours preceding admission, it had been diminishing.

On percussion, extensive dulness was found on both sides of the chest. It was discovered by auscultation, that there was a total absence of breath-sound in the lower half of the right lung; and bronchial blowing, with varying degrees of crepitation, were heard throughout the upper half. Over the two lower thirds of the left lung—interrupted, however, in some situations—a very distinct friction-sound was heard.

By means of a carefully adjusted adhesive plaster applied over the seat of pain, he at once obtained considerable relief; and remarked that if he could only sleep for half an hour, he should be quite well.

The following mixture was prescribed:—

℞ Brom. potassii, ʒij.
Chlor. hydr., ʒss.
Sp. vini Gallici, ℥iss.
Syrupi, ℥i.
Aq. dist. ad ℥viij. M.

Half an ounce of this mixture was ordered to be administered to the patient every three hours when awake. If he were awake and restless three hours after the first dose had been taken, he was to have, with the second dose, thirty minims of the Brit. Ph. liquor hydrochloratis morphiæ.

9 P.M.—He has had two doses of the mixture, and thirty minims of the solution of hydrochlorate of morphia. He has not slept, but says that he has been easier and less restless. His temperature was 38°·8 C.; the respirations are 34; and the pulse, 96.

*Saturday, 25th July*, 9.30 A.M.—There is no amelioration in the physical signs; but the countenance is greatly improved. He says that although his breath continues to be very short, it is not quite so short as it was, and that breathing no longer gives him pain. His temperature is 37°·8 C.; and his pulse 84. He has regularly taken the mixture as prescribed yesterday afternoon. He fell asleep at five this morning, and slept for two hours and a half. Till he fell asleep, he was rather restless, and occasionally called out as if frightened. At present, he is quite free from delirium and delusions. He complains of a dry, hacking cough. The urine passed during the night is albuminous. The friction-sound, heard so distinctly yesterday afternoon, is no longer audible. Obscure ægophony is heard. Bronchophony is heard throughout the two lower thirds of the left lung. The physical signs in the right lung have not changed much since yesterday. Crepitation is more distinct in the upper part; the lower part remains absolutely impervious to air. Occasionally, the patient has fits of dry, hacking cough. He has had several times slight expectoration of a thick, tenacious, and sanguinolent character. He has become feebler since yesterday, although he has taken a great deal of milk and water and beef-tea. He has had no stool since an hour or two hours after admission. The urine is scanty and very albuminous.

To have three ounces of Pulna water every four hours till the bowels are moved.

Instead of the mixture prescribed on admission, four drachms of the following, to be administered every four hours:—

℞ Brom. potassii, ʒij.
Liq. citratis ammoniæ, ℥ij.
Sp. etheris nitr., ʒiij.
Aq. dist., ad ℥viij. M.

*Sunday, 27th July,* 10 A.M.—Since yesterday afternoon, he has been becoming rapidly worse. At 8.30 yesterday evening, his temperature was 39°·8 C. It is now 38° C. At 8.30 yesterday evening, the pulse was 108: this morning, it is 100. Since yesterday afternoon at four o'clock, he has been ceaselessly delirious; and during the night two men were several times required to aid the nurse in keeping him in bed. He is now quieter, but is still delirious, and talks incessantly with persons whom he thinks he sees, and by whose supposed conduct and conversation he is angrily excited. He has refused to take food or medicine since he observed the word "POISON" in large type on the phial containing his allowance of brandy. The belief that he is being poisoned is now his dominant delusion.

*Evening.*—After taking three doses of the Pulna water, his bowels were freely moved. His temperature at 9 p.m. was 39·4 C.; the pulse is 110; and the respirations are 40. The expectoration, which is sanguinolent, is more abundant. He still generally refuses food and medicine; but occasionally, forgetting the poison-delusion, takes them when offered. He talks incessantly, is sometimes violent, and is constantly trying to get out of bed.

*Monday, 28th July.*—During the whole of the night, he was very restless, noisy, and violent. For some hours, it was necessary to keep on the restraint-jacket. Since six this morning, he has been more tranquil and coherent, although he still speaks a great deal to supposed persons. At seven o'clock, the restraint-jacket was removed at his request. He was at that time quiet. About half-past ten o'clock, he suddenly became very violent, when the restraint-jacket was again put on.

*Evening.*—Towards 6 p.m., he became comparatively quiet, when the restraint-jacket was removed. He has occasionally taken food and medicine during the day, when offered to him, but more generally he has declined both, declaring that they contained poison. Since Sunday evening, on account of his restlessness and violence, it has been impossible to count his pulse, take his temperature, or examine his chest by auscultation and percussion.

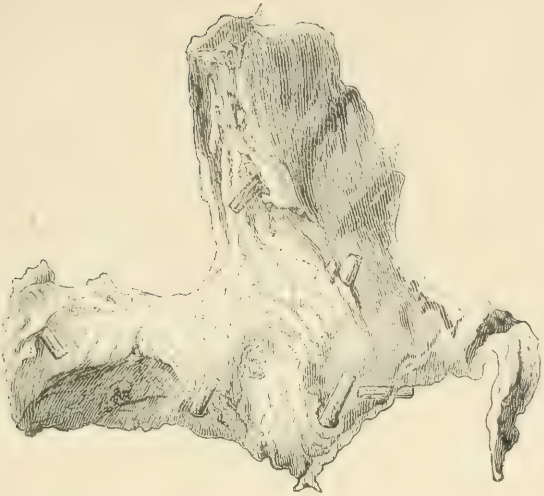
*Tuesday, 29th July.*—When I saw him about 9 a.m. at the commencement of my ordinary morning visit, there was some purpling of the lips and face. He was quieter, and answered questions more intelligently than during the preceding forty-eight hours. When asked, "Do you feel better or worse than yesterday?" he emphatically replied at once, "*Better;* and if my broken ribs would let me breathe, I should be quite well." When proceeding with my examination, I was called to receive a messenger in the nurse's closet immediately adjoining. When there—about ten minutes after I had been called from the patient's bedside—I was recalled by the nurse, who informed me that the patient had just died suddenly, without a struggle. In less than two minutes I was beside the body, which was pulseless—undoubtedly *dead* within ten or fifteen minutes from the time I had been questioning him.

*AUTOPSY:* 4 P.M., *30th July.*—Thirty-one hours after death. Decomposition had not commenced.

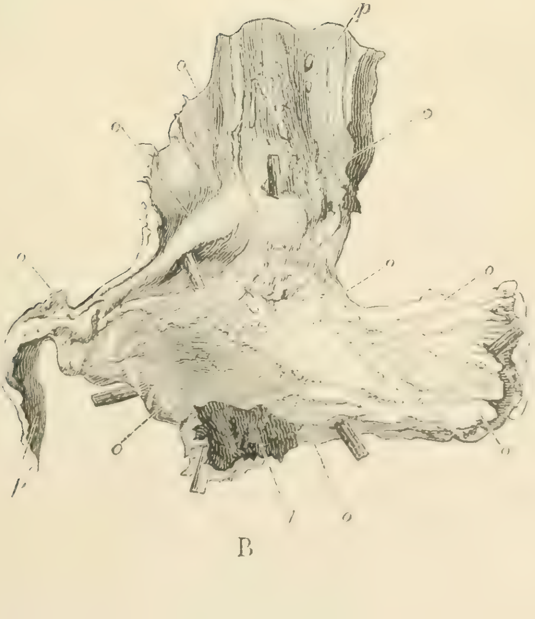
*Thorax.*—The lungs were throughout firmly attached to the costal walls of the chest, and to the diaphragm, by thick and dense false-membrane and thickened pleura. The pericardium was also everywhere adherent to the pleura. The removal of the lungs and heart in one mass was consequently accomplished with difficulty. By some of the adhesions, the costal and pulmonary pleuræ were so closely agglutinated as to be inseparable; and in some situations, when the lung was dragged, the costal pleura, together with false-membrane, was torn from the ribs. In other situations of limited extent, the state of general agglutination did not exist, some room being left for the play of the lung; in these situations, there was some straw-coloured serous effusion. On introducing the hand to separate the lung from its posterior adhesions to the thoracic parietes, the fingers came in contact with a hard, long-shaped body, lying seemingly parallel to the ribs, and having a jagged surface. This body was at first supposed to be a fragment of a broken rib; but this supposition was immediately negatived by an examination of the ribs, which, with the dorsal portion of the vertebral column, were removed; and are now presented to the Society. None of the ribs are fractured, none of them present thickening of the periosteum, or exostoses. Their surfaces are smooth. The hard body was imbedded in the thickened pleura and false-membrane. It lay in front of the seventh and eighth ribs, and its longest position lay nearly parallel with the eighth rib. Where nearest to the vertebral column it was two inches distant from it. It was inseparably agglutinated to the lung, into which it seemed as if it had been thrust, or had grown. With the surrounding pleura and false membrane, and a portion of adherent lung, it was removed for chemical and microscopical examination.

The accompanying drawings give an anterior and a posterior view of the preparation as reserved for future scrutiny. Drawing A represents the anterior, and drawing B the posterior view. The length of the longest part of the pseudo-osseous formation is 3 inches; its breadth, at the broadest part, is 1 inch; in thickness it varies between 3 and 4 lines. The body in question may be said to roughly resemble the capital letter L. It is of firm consistence, and in general external appearance bears a considerable resemblance to bone. In drawing B, the limits of the pseudo-osseous body are indicated by the letters o, o, o,; the letter b refers to a small portion of lung left to show the nature of the adhesion; and p, p, p refers to thickened pleura. When tapped with the handle of the scalpel, a sound was elicited exactly similar to that caused by tapping a rib in the same way. Chemical examination showed that it consisted principally of carbonate of lime. Dr Cleland of Glasgow examined sections of it carefully under the microscope, and found that it was calcified connective tissue. I now present to the Society two microscopic slides of sections which Dr Clelland has had the kindness to send to me. One shows the original or calcified state, and the other the decalcified state.

The right lung weighed 1400 grammes; its lower half, in a state of grey hepatization, was friable, and a section of it, when slightly pressed, exuded pus, which came principally from the divided air-tubes. The upper half of this lung was in a state of red hepatization. When a cut surface of it was pressed, there exuded a small quantity of serosity, but no pus. No portion of the right lung floated in water. The left lung weighed 940 grammes. The upper third was congested, but floated in water. The lower two-thirds were in a state of red hepatization. Sections of all parts of the left lung exuded a sanguinolent serosity when pressed. The left pleura contained, in sacculated pouches, some ounces of a yellowish serous fluid. The entire calibre of the pulmonary artery was filled by a firm, tough coagulum, which was of a pale-yellowish colour, except at its circumference, where there was a narrow black rim of the consistence of thick jelly. The principal branches of the pulmonary artery were similarly plugged. All the cavities of the heart contained coagula of various degrees of consistence. Some were pale and tough; others—particularly those in the right auricle—were black and gelatinous. The coagulum which plugged the pulmonary artery and its branches was a prolongation of that contained in the right ventricle. The clot in the left ventricle extended into the aorta. It was dragged down from



A



B

the arch without giving way. The *pericardium* contained about two ounces of straw-coloured serosity. The *heart* was surrounded by fat. Its valves were healthy. All the cardiac cavities contained coagula, as has been already stated. No atheromatous, calcareous, or other deposits were found in any of the bloodvessels connected with the heart, or in any situation within the chest or elsewhere, though search was made for them.

*Abdomen.*—The *stomach* and *intestinal canal* did not present any morbid appearances. The *liver* weighed 2270 grammes: it was very red throughout, and much congested. The *gall-bladder* contained a small quantity of bile. The *spleen* was enlarged and congested; it was easily broken down by digital pressure. Both *kidneys* were enlarged and congested, particularly the left, which was very red, and weighed 290 grammes. The weight of the right kidney was 235 grammes. From both kidneys, the capsules were easily peeled off. The shape of the left kidney was peculiar: it seemed as if divided into three lobes by two deep furrows. The shape of the right kidney was normal. The *urinary-bladder* contained about an ounce of urine, which was deep red, albuminous, and of high specific gravity.

*Encephalon.*—Excepting a state of great congestion, no morbid appearances were observed in the encephalon.

## COMMENTARY.

Several features in the case now described afford interesting subjects for clinical, pathological, and medico-legal study, viz.:—

1. Origin and Nature of the Fatal Illness.
2. Manner and immediate Cause of Death.
3. Nature of the Pseudo-Osseous Body found in the Pleura; the Conditions under which similar Adventitious Products are formed in the Pleuræ and in other situations; the Consequences which they produce; and the Errors in Diagnosis to which their presence may lead.

### I.—*Origin and Nature of the Fatal Illness.*

The patient was already ailing when he injured his chest by falling on the pail. That accident, therefore, was not the primary cause of his fatal illness; but it was the cause of that illness taking the acute form which terminated in death.

From the history received on admission, both from the patient and the person who brought him to the hospital, it is almost certain that he had been affected by a fresh attack of pleurisy for some days before he fell on the pail. It was a disease from which, in chronic and subacute forms, he had suffered much; and under acute attacks of which, he had more than once nearly succumbed. The injury received in the fall converted a subacute into an acute pleurisy. Had there been no sharp and hard adventitious product in the pleura, it is very improbable that the fall would, so immediately and so violently, have aggravated the inflammation.

The fall seems to have caused a forcible propulsion inwards of the pseudo-osseous formation discovered at the autopsy; and to have thereby excited acute pleuro-pneumonia, with pleuritic effusion. There was at the same time developed that formidable type of alcoholism incident to habitual drunkards, when they become affected by acute inflammations, whether of traumatic or non-traumatic origin.

From a medico-legal, as well as from a clinical and pathological point of view, the case of Joseph S. is interesting and instructive; for the inward propulsion of the pseudo-osseous formation caused by the fall *aggravated* intra-thoracic inflammation, which it would, no doubt, have *originated* had it not already existed. The medico-legal point in the case is so obvious as not to call for comment. It is evident, that if in any case death were to follow a similar inward propulsion caused by a blow received in a scuffle, the inflicter's culpability would be less than in a case in which no such peculiarity existed.

### II.—*Manner and Immediate Cause of Death.*

It is remarkable, though easy to explain, that the man should have died so suddenly and so quietly, a few minutes after my leaving him in the midst of a conversation in which he had intelligently joined. Though, during that conversation, nothing indicated that *immediate* death was impending, the purpling of the lips and face showed that asphyxia and its attendant anæsthesia—phenomena of incipient death—were present.

The immediate cause of death was discovered at the autopsy to be occlusion of the pulmonary artery by a compact fibrinous coagulum. The exact length of the period during which the thrombosis was forming, it is impossible to determine; but, taking into account the great extent to which fibrinous coagulation had proceeded within the heart, pulmonary artery, and other vessels, the process had no doubt been going on for many hours—perhaps for days—before death. The completion of the occlusion of the pulmonary artery did not occur till immediately before death; and may even to some extent have taken place after respiration had ceased. The coagulum was, no doubt, as is usual in such cases, a central plug, allowing a certain amount of blood to flow on to the lungs between it and the walls of the vessel. This passage for the blood was gradually diminished by the peripheral increase of the coagulum; and by that process, it at last became impervious, and death was necessarily the immediate result. The manner in which the impediment to sanguineous aeration had arisen was so gradual that it had produced in the system a tolerance for the toxaemia incident to that abnormal condition. Life went on in an impaired form. Death advanced slowly. At last, life was abruptly terminated by the partial impediment to the flow of blood to the lungs becoming a complete obstacle to its passage.

(*To be continued.*)

## ARTICLE VI.—*The Protection Bed and its Uses.* By W. LAUDER LINDSAY, M.D., F.R.S.E., Physician to the Murray Royal Institution, Perth.

### (A SUPPLEMENTARY PAPER.)

SINCE the publication, in the number for February 1878, by the *Edinburgh Medical Journal*, of a paper with the above title, information has reached me from various quarters showing that the idea of some such bed has occurred to various physicians, in various forms, at various times, and in various countries, and that in some countries the use of some form of "Protection Bed"—for the insane at least—is not only extensive, but is increasing rapidly. These facts are, of course, but so many powerful arguments in its favour.

It appears to me desirable to adduce a few of the facts referred to in order to the encouragement of the use of some such bed, especially in England, where, of all countries in the world, it seems most to be required—where fatal and other injuries from its *non-use* are of frequent occurrence.[1]

In the first place, then, the *American Journal of Insanity* did me the honour of reproducing the whole of the (February 1878) article on the "Protection Bed," in its quarterly number for April 1878 (p. 517). To the reprint was prefixed a short historical account of the use of such a bed in some form in different countries—an account of such general interest that I need offer no apology for here quoting it *ad longum* (from p. 515).

"The crib-bed was devised in France by Dr Aubanel,[2] of the Marseilles Lunatic Asylum, in 1845,[3] and described in the *Annales Médico-Psychologiques* for November of that year. This bedstead was introduced into the asylum at Utica by Dr Brigham in 1846, and was described as 'made in the form of a *bunk*, with a convex latticework covering it, and fitting evenly to the margin. This is of such a height as to allow the patient sufficient freedom of motion; it is affixed by hinges to one side of the bedstead, like the cover of a trunk, and is fastened at night by two clasps on the opposite side."[1]

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[1] I allude to such injuries as those that happened to the unfortunate Italian, Santa Nistri, at Hanwell, on 21st of October 1869, and which were the subject of a leader, entitled "Death in a Lunatic Asylum," in the *Daily Telegraph* of 30th of same month; or to those compiled from the Blue-Books of the English Lunacy Commissioners, and published under the title, "A Social Blot," in the *British Medical Journal*, vol. ii., for 1870, p. 441.

[2] Something of the same kind, *minus* the cover, is described by Dr M'Intosh of Murthly, as having been in use in the celebrated Bicêtre, Paris, in 1861 (*Journal of Mental Science* for April 1862, in an article on "Asylums and the Insane in France and Belgium"). Referring to a case of acute mania in a young man, he says, "His iron bed had sides about 18 inches in height, and softly padded; one of them folded down."

[3] This cannot, however, be the true origin of such a bed; for, in 1868, Dr W. A. F. Browne, of Dumfries, whose erudition on medico-psychological subjects cannot be doubted, informed me that what he himself had long used under the title of the "Conservative Bed" was "the bed formerly in use on the Continent, and figured on p. 250 of Guislain's *Lettres Médicales sur l'Italie*, in 1840, deprived of its noxious parts and peculiarities."

"Dr William Wood, Medical Officer of Bethlem Hospital, England,[2] describes a similar bed, which he calls the *Enclosed bed*, of which he gives a drawing[3] in *Winslow's Journal of Psychological Medicine* (vol. v., 1852).

"The principle of this bedstead is that of a *crib* with a lid to it, the inside being padded . . . . the lid consisting of a network of webbing, without any woodwork projecting over the patient as he lies in bed, and being at a sufficient height from the top of the mattress to allow of free movement by turning from side to side, without touching the cross-webbing of the lid.

"In 1854 the *bunk*, or *Aubanel, bed* was abandoned at Utica, and one constructed modelled after the pattern described by Dr Wood, with this modification, that the sides were made with rungs like an ordinary child's crib, instead of with boards as the English bed. This bed, as now employed, is thus described in the *Eighteenth Annual Report of the New York State Lunatic Asylum* (for 1861) :[4]—

"This bed is constructed like an ordinary child's *crib*, with the addition of a slatted cover. This arrangement does not interfere with the movements of the patient in rolling from one side of the bed to the other, or in moving the limbs in any way ; it merely prevents the patient from sitting up in, or getting out of, bed. As the sides and top are open, the air circulates as freely about (the body of) the patient as in an ordinary bed."[5]

One of the results of the republication of my (February 1878) paper on the "Protection Bed," in the *American Journal of Insanity*, was, that it attracted the attention of Dr Manning, who constitutes in himself a lunacy board for the important colony of New South Wales. At his instigation the Government of that colony officially applied to me, in February 1879, for a specimen of the protection beds actually used in the Murray Royal Institution, Perth, and the result was, that one was at once supplied for the purpose of transmission to Sydney, and of introduction into the public asylums of New South Wales.

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[1] For full account, see the *American Journal of Insanity* for October 1846.

[2] Dr Wood has long been physician to St Luke's (Hospital for the Insane), London, and proprietor of the Priory (Private Asylum), Roehampton (near London).

[3] There would thus appear to be extant, in a published form, no less than three sets of drawings of some form of protection bed, viz., those of (1) Dr Guislain, 1840 ; (2) Dr Wood, 1852 ; and (3) Dr Lindsay, 1878. I have never, however, had any opportunity of seeing the drawings of Drs Guislain and Wood, or their descriptions thereof.

[4] I find the same description also in the *Twenty-First Annual Report*, 1864, p. 27—a report that discusses fully the whole subject of *mechanical restraint* in the treatment of the insane (pp. 25-28). Very much the same ground anent "restraint" is gone over in the *Eighteenth Report*, 1861, pp. 22-25.

[5] This is a simple statement of *fact* by the editors of the leading *American Journal of Insanity*. It may be contrasted with the *fanciful* description of a sensational American writer, quoted in the *Journal of Mental Science*, vol. xiv., 1869, p. 205, referring to the use of what would there appear to be called a "Case-bed," in the Texas State Lunatic Asylum.

Now, so far as I am aware, there is no *English* authority in lunacy who can compare with Dr Manning in regard to the experience he has had of the management of the insane in all parts of the civilized world—experience gathered as Special Commissioner of the New South Wales Government in 1867. Nor is there any English Government Blue-Book that, in the fulness of its details concerning the organization of lunatic asylums, can approach Dr Manning's "Report on Lunatic Asylums," presented to his Government, and printed in 1868. The fact, then, that the want of such a bed has been felt by him, and that he regards the special form of protection bed described in the *Edinburgh Medical Journal* in February 1878 as likely to meet this want, is *pro tanto* testimony in its favour.

But another of our colonies has already done much more than New South Wales proposes to do in the use of the protection bed, seeing that Dr Reid, the medical head of the Provincial Hospital for the Insane at Halifax, Nova Scotia, in his latest report, of date 1879, announces that he has what may be conveniently called *the Murray pattern*[1] of protection bed in use, and that he purposes extending its use.[2] He says (p. 6 of his *Report*, which is a State Blue-Book), "Those who would be on foot all night, pounding doors, screaming, destroying their bedding, or polluting the walls and floors of their rooms, are enabled to sleep the greatest part of the night by means of the protective bed, which keeps them comfortable, and prevents them from wearing themselves out by constant restlessness—the prominent feature in acute mania. The use of sedative, antispasmodic, and narcotic medicines is superseded. A draught to quiet a patient is very rarely required to be given, and when given, is not with the intention of quieting, but of producing some necessary therapeutic effect."

"Eleven protection beds are now in the wards, and more are required. They are similar to those used at the Murray Royal Institution, Perth, Scotland . . . . and also in use in most asylums of the Dominion and United States.[3] Their use is *necessary* for paralytics and epileptics, who roll out of ordinary beds and hurt themselves, or who throw off the clothes; also for those who are destructive, and injure themselves. For ordinary use they are as convenient and comfortable[4] as an ordinary bed, and cost about the same sum" (P. 19).

[1] From the name of the institution in which it has long been used.

[2] It is noteworthy that, on the one hand, nobody who has tried some such bed has (so far as I know) given up its use, or spoken otherwise than favourably of its utility; whereas no objector to, or caviller at, the bed has himself tried it; and the opinions of those who speak and write so freely and so frequently in utter ignorance can be possessed of no sort of value.

[3] This is another point in favour of the utility of such beds—that they are in use in the important State asylums of the British provinces of North America, as well as of those of the American Union.

[4] Invalids themselves find them *more* comfortable, for they manifest a decided preference for protection beds; in other words, they feel or think themselves really "protected" in them.

"Four dozen bedsteads are required to supply those who are sleeping on the floor, to replace the worn-out, and to occupy the space into which patients must be crowded. They should be of the protective pattern, because, though but little more costly,[1] they serve all the purposes of an ordinary bed in a superior manner, and can be used for special cases, if required" (P. 22).

Here there is obviously entire confidence in the usefulness of the protection bed, and in its adaptability to a great many conditions of enfeeblement or disease. But there was apparently equal confidence in its efficacy as a "conservative" appliance on the part of one of the most distinguished and most experienced asylum physicians of our own country, who was in the habit many years ago of applying it "to the aged, weak, worn-out; the restless from malaise and exhaustion; the abraders, rubbers, nudifiers, and those with bed-sores; for, in addition to its stuffed sides, it may contain water-cushions, pillows, waterproof sheets,"[2] and other special apparatus.

Dr Gilchrist of Dumfries, too, has, and must have had, great confidence in its usefulness, seeing that he has employed it in three important Scotch asylums[3] for at least a quarter of a century, and that he continues to employ it. In his very last *Report of the Crichton Royal Institution*, and *Southern Counties Asylum*, both at Dumfries—that for 1878 (39th, p. 7)—he makes the following remarks on what he describes as the *Safety* or *Preservative Bed*:—

It "is an ordinary box-bed, with padded sides and a netted cover—to prevent egress. It is commonly used for two sets of cases:—First, for patients who are specially weak and restless, who are thus preserved alike from injury and exhaustion. Second, for patients who are not only weak and restless, but intensely suicidal. For these it is still more useful, as it secures them against self-inflicted intentional injury."

"It is recorded as having been occupied 483 times (during the year). These occasions, however, refer to only four patients. One person occupied it once, another seven times, a third 110 times, and a fourth 365 times. An explanation of the last case will apply to them all. This case is that of a lady patient, who is the most intensely persistent suicide met with in a quarter of a century's practice. She has been resident for upwards of three years, and has

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[1] I had occasion to ascertain, for the information of the Government of New South Wales, the exact *cost* of those used in the Murray Royal Institution; which cost per bed was as follows:—

| | | | |
|---|---|---|---|
| Joiner work, . . . . . | £4 | 14 | 0 |
| Smith „ . . . . . | 0 | 14 | 0 |
| Painter „ . . . . . | 0 | 17 | 0 |
| Total, . . . . . | £6 | 5 | 0 |

A working model, including packing-case, costs 30s. In 1864 the same bed, padded, only cost £3, 15s. 4d.

[2] Extracts from a letter of date December 1868.

[3] He did so first in the Montrose Royal Asylum.

undergone no change for the better. Self-injury is attempted at every possible moment day and night, in every possible way. She has had an attendant day and night for the whole time of her residence; while frequently, and for long periods, she has required more than one. Sometimes three or four are required, and the camisole besides. She has occupied the Safety Bed every night during the year, and is consequently recorded as having been restrained 365 times. It is not easy to understand why a bed, which tends to secure rest and sleep, husbands vitality, prevents exhaustion, and secures against danger, should be called an instrument of restraint."

Now, there is no asylum physician in England who carries out so fully and so far the modern humane system of treatment of his patients as Dr Gilchrist does; and there has been no English asylum that has been able to compete *longo intervallo* with the Crichton Royal Institution at Dumfries, as regards the extent to which, and the varied forms in which, it has developed what is usually called the "moral" treatment of its inmates. And yet in this asylum we find the use of a *Conservative Bed* regarded—and very properly so—as the most humane way of dealing with certain classes of dangerous patients.

In 1870, the medical superintendent (now deceased) of one of the large new county asylums of England thus addressed me—"I have long thought of writing to ask if you will kindly inform me where I can find an account of the construction of your locked beds, which you are said to find so useful in cases of general paralysis? It has sometimes seemed to me that, in certain cases of that disease, in an advanced stage, the use of such a bed might be fraught at once with safety, economy, and humanity." After receiving drawings and descriptions he wrote—"Although the look of it is not attractive, I am certain it must be extremely useful. . . . . . What there is of restraint in your bed more than in the contrivance of a *padded room*, which is nightly locked on a patient, I am unable to see. . . . . . Although I cannot promise at present to make trial of the protection bed, I have always had it in view at a time when I might take independent action to prove its utility."

Another correspondent—now retired from office—who was for a quarter of a century at the head of a much more important public asylum, during which he had a large experience of some form of protection bed, writing me in 1868, remarked that "in the worst light in which it can be viewed it is nothing more than a *padded room* upon a small scale."[1]

But I do not regard the comparison with a padded room as at all an apt one ; because, as was pointed out in my previous paper, in a padded room a patient is locked in and is unattended and unseen, unless at intervals which may be as much as ten or twelve hours at a time ; whereas in a protection bed there is no necessary locking of any kind,[1] and the patient is in a well-lighted, well-warmed sick-room, tended night and day by special nurses. The instances in which the lid requires to be applied at all are rare compared with those in which the sides, or one side only, or the lowness of the bottom of the bedstead above the floor, render the use of such a bed desirable.

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[1] Conolly, on the other hand, spoke of his padded room as "a complete bed" (*Treatment of the Insane without Mechanical Restraints*, p. 45, 1856). But in the absence of such padded rooms he gives it as his opinion that certain patients cannot be "safely placed in an ordinary sleeping-room unless they are fastened to the bedstead!" (p. 49.)

The superintendent of another of the newest county asylums of England—that for Berkshire at Moulsford, in his very first Report (in 1872, p. 30)—informs us that "a certain number of *crib* bedsteads, some of them with *padded sides*, were specially ordered for epileptic patients."

A second experienced asylum superintendent, who familiarized himself some years ago with the practice of American asylums, wrote me in 1868—"Your views regarding the protection bed correspond very closely with those of the *American* superintendents. In fact, your words remind me very forcibly of what Dr Gray, of the New York State Asylum, said—that he was convinced he had saved patients' lives by keeping them locked in it, when they were disposed to exhaust themselves by being constantly on their feet. The medical superintendent of the Indiana Asylum remarked to me regarding a patient who was locked in one . . . . . that she was getting quite fat there."[2]

The proprietor of, and physician to, a large English private asylum, writing me in November 1878 for particulars concerning the construction of protection beds, remarked—"I almost doubt whether I could use it in England with the present staff of Commissioners.[3] However, there are differences of opinion on the subject of restraint even among them." This is a slight, but it is a significant, indication of the mischievous influence of the English Lunacy Commissioners in repressing freedom of action among the superintendents of English asylums.

On the other hand, the medical head of one of the leading State Asylums of the *American* Union wrote me in August 1878

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[1] At present, for instance, in the Murray Royal Institution 10 per cent. of the bedsteads in use are of the protection pattern. But in no case is the lid used, and only in one instance is the folding side fastened up to prevent an epileptic rolling out during frequent fits.

[2] The Inspector of Asylums for the province of Ontario, reporting on the London (Canada) Asylum in 1877, refers, among other instances of mechanical restraint, to "two men confined in crib beds, with muffs on. The restraint in every instance appeared to be *absolutely necessary*" (Report of said Asylum for 1877, p. 14).

[3] If my correspondent will refer to the *Twenty-third Report of the English Commissioners* (for 1869, p. 142), he will find that these authorities themselves recommend for certain classes of patients the provision of "low padded bedsteads," which involve at least sides such as all forms of protection bed possess.

—"I have had occasion within the last year to send to a superintendent in another of our States your remarks in one of your annual Reports upon the protection bed. It was of value to him in a time of need." In other words, while in *England* the terrorism of Lunacy Boards and Lunacy Laws prevents freedom of action and proper action on the part of asylum physicians, in America the physicians of asylums, public and private, seek only for that which is most suitable in any given emergency, and having found it forthwith use it.

Another distinguished American asylum physician — now retired from office—in May 1878 thus addressed me on the subject of the protection bed—"I think that your views would be generally endorsed by the superintendents of insane asylums in this country."

*(To be continued.)*

## ARTICLE VII.—*Observations on some Points in Dextral Valvular Disease of the Heart, being a Graduation Thesis.* By ALEXANDER MORISON, M.D. Edin., of London.

*(Continued from page 523.)*

### PART III.

THE competent closure of healthy valves is due to perfect systole of the chamber, at the orifices of which such valves are placed. Incompetent closure, or incompetency of the same, is due to an opposite condition—imperfect systole. The etiology of imperfect systole, therefore, must be the etiology of valvular incompetency. Perfect systole signifies a healthy state of the heart-muscle, and a normal capacity of the ventricular cavity. Perfect systole may likewise exist when the capacity of a ventricle is diminished, as such a condition in an originally normal heart, signifies concentric hypertrophy. But, further, even if there be an increase of capacity, and the walls retain a normal vigour, from the universal hypertrophy, of all the constituent elements of the heart, systole may be sufficiently perfect to insure valvular competency. As I have already pointed out, however, the latter condition is transitory, and, as a rule, gives place to progressive dilatation of the ventricle, and the consequences of the latter—imperfect systole and coetaneous incompetency of the valvular guards at its orifices. We have, therefore, so far particularized our proposition, and may state that the etiology of ventricular dilatation is the etiology of so-called functional valvular incompetency.

Although it is my intention to limit my remarks to valvular deficiency in the right heart due to impediment in the circulation on the proximal side of the left heart, there are some general considerations pertaining to dilatation consequent on circulatory obstruction in the arterial heart, which will assist in the elucidation of the causes of dilatation of the right ventricle.

Taking Dr Aitkin's *Science and Practice of Medicine* (ed. 1872, p. 593 et seq.) as supplying a trustworthy exposition of prevalent views on the subject in question, we find he states in vol. ii., at p. 593, the cause of dilatation of the heart cavities to be "over-distension of the heart's fibres;" and again at p. 593, quoting the authority of Dr Fothergill, he says—"The greater the distension, the more frequent and greater are the efforts at contraction. Such increased and frequent contraction tends to increase the arterial distension and tension, and so far relieves systemic symptoms. But increased arterial recoil takes place, propelling more blood into the coronary arteries during diastole, which thus increases and improves the coronary circulation, greatly increasing thereby the nutrition of the heart, and thus promoting compensatory hypertrophy, enabling the muscular walls the better to resist the distending action of the blood (in the ventricle ?), or overcome obstruction to its forward flow;" and again, he summarizes the causes of the permanent establishment of dilatation at p. 594 of the same work.

It is not, I need scarcely remark, my intention to dispute the fact, that cardiac dilatation is frequently associated with one or other, or one or more, of the conditions enumerated, but to suggest, as a causal element in the production of dilatation, the active operation of an agency not sufficiently indicated by Dr Aitken, but discussed at considerable length in this thesis; namely, the active or passive, or both active and passive, turgescence of the coronary bloodvessels.

I admit that over-fulness of the ventricles tends to distend those cavities by stretching, and especially, from its greater thinness, the right ventricle; but although this may be the initial event where the circulation is obstructed either from the disease of the respiratory or circulatory apparatus, it is of short duration, and the dilatation which we detect at the bedside, either in acute or chronic disease, is, I would suggest, to be accounted for otherwise. When, from such circulatory impediment, we have repletion of the ventricles, the process differs according as the repletion is first experienced by the left or the right ventricle. When the former is the case, I would read the passage I have quoted from Dr Aitkin's work as follows:—"The more frequent and greater are the efforts at contraction, such increased and frequent contraction tends to increase the arterial distension and tension, and so far relieves systemic symptoms. But increased arterial recoil takes place, propelling more blood into the coronary arteries, *causing a more perfect diastole*, which together (the increased recoil and more perfect diastole) increase and improve the coronary circulation, relieve pulmonary stasis by means of the absorptive force of a more perfect diastole, and diminish in turn the repletion of the right ventricle, while the more efficient action of the latter supplies a *vis-à-fronte* for emptying the coronary veins in aid of the *vis-à-tergo* for the same purpose, supplied by the increased coronary arterial fulness. These circumstances combined greatly increase the nutrition of the heart, and promote an hypertrophy which enables the muscular walls the better to resist not only the distending action of the blood in the ventricles, but also the more powerfully distending force of an increased impulse in the coronary circulation." Moreover, if dilatation be superadded to hypertrophy, it must be regarded as a partial diastole becoming persistent under the influence of a permanently-increased coronary circulation; and further, such a condition of concomitant dilatation, so long as the walls of the ventricles remain healthy and their valves perfect, aids the emptying alike of the coronary, pulmonary, and systemic venous circulations by the absorptive force of a more powerful diastole, while the greater power of the systole of an hypertrophied heart assists in overcoming obstruction to the forward flow of the blood.

When the pulmonary circulation is obstructed on the proximal side of the left heart from any cause, such as bronchitis, the right ventricle is the first to feel the consequences of such an obstruction, in over-distension of its cavity, which, if continued for a sufficient length of time, results in tricuspid incompetency, and still greater embarrassment of the systemic and pulmonary circulation. The mechanism of ventricular dilatation, when the initial event is repletion of the *right heart*, differs from the mode of its production in valvular disease of the left. I cannot better illustrate this than by criticising the statements of Dr G. W. Balfour on the subject in one of the most interesting chapters of his recent work on *Diseases of the Heart and Aorta*. As an example of curable tricuspid regurgitation, Dr Balfour mentions a case of acute bronchitis with symptoms of a greatly embarrassed venous circulation, in which not only was there tricuspid, but, in Dr Balfour's opinion, mitral regurgitation, both of which ultimately disappeared, and in their removal digitalis appeared to be of great service. This curable mitral regurgitation Dr Balfour considers as having resulted from "febrile muscular relaxation" (p. 185), and in a foot-note (pp. 182, 183) expresses surprise at Gerhardt's ignoring tricuspid regurgitation, and regarding the systolic mitral murmur under such circumstances as "a sign of local anaemia," "produced in some extraordinary manner by the defective blood-supply in the left side of the heart and arteries." I would interpret these physical signs thus:—An obstructed pulmonary circulation, the result of bronchitis, caused ($\alpha$) distension of the chambers of the right heart by excessive accumulation of blood within them; ($\beta$) as in all cases of asphyxia, there was diminished transmission of blood to the left chambers; ($\gamma$) the distended right chambers caused stasis in the coronary venous system, both on account of the obstruction to the escape of blood into the right auricle, and because of the imperfect *vis-à-tergo*, resulting from the smaller quantity of blood thrown into the aorta by the left ventricle; (δ) the latter condition (stasis) produced engorgement of the cardiac walls, and counteracted systole to some extent by favouring dilatation or diastole; (ε) imperfect systole rendered the perfect closure of the tricuspid valves difficult, and hence conduced to regurgitant incompetency; (η) a similar process of cardiac engorgement in a high degree had a similar influence on the closure of the mitral segments, regurgitation through which was in addition favoured by the scarcity of blood in the left ventricle already referred to, and very appropriately described by Gerhardt as a "local anæmia."—(*Lehrbuch der Auscultation und Percussion*, 1871, p. 264.)

The active influence for evil, of which an impeded current in the coronary veins is capable, is argued by the fact, that while the great systemic veins emptying themselves into the right auricle are unprovided with valves, the coronary veins *are* so protected at their very entrance into the main coronary sinus. When this barrier, however, is overleapt by excessive retrograde pressure, there are no further valvular impediments to encounter, and the obstructed current forthwith begins to exercise its pernicious influence.

*Experiment No.* 8.—If the process of rendering the coronary circulation turgid be reversed by distending the right chambers of the heart by way of the superior vena cava, after ligaturing the inferior cava and pulmonary artery it will be found much more difficult to effect that object than by injection per aortam; and even when the nozzle of the syringe is inserted into the coronary sinus, considerable resistance is offered to the water entering the coronary veins. Such an obstruction is, however, soon overcome under the influence of continued pressure, and the coronary veins filled with water.

I have recently had under my care a case which illustrates these remarks on the mechanism of tricuspid incompetency, and is one of a class which must be familiar to all. It was that of a bricklayer, Charles Coulson, 40 years of age, who had for some years suffered from chronic bronchitis and emphysema, at intervals aggravated by more acute symptoms. During his last illness his symptoms were more severe than on any previous occasion, and the right half of his body, towards which side he incl ned, became highly anasarcous, while the left half remained for long emaciated, and free from dropsy. His urine, though frequently below the average normal quantity, was free from albumen. The physical signs of the lungs and heart were those of an advanced stage of bronchitis with emphysema. While such was his general condition, the point I wish to mention particularly I have noted in my case-book on the 25th of January 1878 as follows:—The stethoscope revealed a distinct systolic bruit, loudest immediately to the left of the sternum, between the fifth and sixth ribs, which was less distinctly heard in the epigastrium.

The jugulars were at the same time tense and the face suffused.

℞ Tinct. digitalis ʒi.
Sp. ammon. aromat, ʒij.
Sp. æth. chlor. ʒij.
Aq. camph. ad. ℥vi. Misce.

Sig. One tablespoonful to be taken every four hours; also, ℞ Sp. vini gall. ℥ss., occasionally.

Next day, the rhythm of his heart's action, which had hitherto been regular but quick, changed. The diastolic pause was distinctly prolonged, and the unmistakable bruit of the previous day had disappeared.

He continued to take digitalis, and on January 27th the bruit was still absent, and the rhythm of the heart as before. Again, on Jan. 31st, I find in my note-book: "Looks better, breathes more easily, bruit still absent. The pulse at the wrist is 72 per minute, and is regularly intermittent, and of equal strength. That is, there is an appreciable pause at every second beat, and the force and volume of the pulse are equal. Two beats and a pause at the wrist correspond with three sounds at the heart; thus, lup, dūp, dūp; the last "dup" is prolonged in proportion to the preceding "lup, dup." This I take to be reduplication of the first sound, and prolongation of the diastolic pause. "Omit digitalis." And on 1st. Feb., "Pulse and heart correspond; no prolongation of diastole; no bruit; otherwise in *statu quo*."

From this date his condition varied. One day the anasarca would be greater, and the pulse weaker than on another. The pulse temporarily increased in force under the influence of a more frequent repetition of the digitalis, and the heart's sounds when examined were usually free from bruit. On one occasion a systolic bruit was thought to have been detected in the epigastrium, at the point of the ensiform cartilage. The absence of bruit, at this period of the case, was with greater probability attributable to pericardial effusion, with impotent systole, than to absence of tricuspid regurgitation.

The left half of the body also became anasarcous, but much less so than the right. Finally, on Feb. 14th, 1878, with a regular soft pulse of 120, he gradually lost consciousness, his pupils becoming insensible and his breathing slower, until he died at 7 P.M. the same evening. I examined the contents of the thorax, twenty-six hours after death.

Rigor mortis was not well marked. The body was anasarcous, and the right half much more so than the left half. Subcutaneous fat was deficient. Towards the posterior half of the body the subcutaneous textures were œdematous. The cartilages of the ribs were not ossified. On raising the sternum, the lungs collapsed very slightly, and the edges of opposite lungs were in close apposition and adherent, completely covering the heart, except a small portion of it lying opposite the 4th and 5th intercostal spaces, on the left side, and extending as far to the right as the middle line of the sternum. The lungs were universally adherent to the costal pleura, and likewise to the pericardium covering the heart and large vessels. They were emphysematous in a high degree, and the pleural cavities contained little or no fluid, as all available space was occupied by distended and adherent lung.

The pericardium contained about half-a-pint of straw-coloured serum, but exhibited no evidences of recent inflammation. The visceral pericardium on the anterior surface of the heart was thickened and opaque over a considerable extent of surface.

The coronary veins were intensely engorged, full and prominent, especially on the posterior surface of the heart. The heart itself was much enlarged, and the right auricle was prominent, full, and distended to the size of a good plump kidney, and contained a huge black clot, as also did the right ventricle. The left ventricle contained a small dark clot, and the left auricle was empty.

The heart weighed 18 ounces.

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| The circumference of the right auricle was . . | 20 ct.m. |
| The greatest height of the right auricle from the attachments of the tricuspid segment was . . | 7 ct.m. |
| The thickness of the right auricular wall was . . | 3-5 m.m. |
| The circumference of the tricuspid orifice was . . | 14 ct.m. |
| The breadth and length of the anterior, internal, and posterior segments of the tricuspid valve were respectively, 6 ct.m. × 2½ ct.m ; 4½ ct.m. × 2 ct.m. ; and 3 | ct.m. × 18 m.m. |
| The length of the right ventricle perpendicularly from the attachment of the tricuspid to the apex was . | 8 ct.m. |
| And obliquely from the attachment of the pulmonary valve to the apex, . . . . . . | 10½ ct.m. |
| The thickness of the muscular wall of the right ventricle, excluding the pericardial textures, was at the base, . . . . . . . . | 10 m.m. |
| At the middle, . . . . . . . | 10 m.m. |
| At the apex, . . . . . . . . | 5 m.m. |
| That of the anterior wall of the conus arteriosus was | 11 m.m. |
| The circumference of the pulmonary orifice was . | 9 ct.m. |
| And the breadth and length of the pulmonary segments, . . . . . . . | 3 ct.m. × 15 m.m. |
| The circumference of the left auricle was . . . | 11 ct.m. |
| The thickness of the left auricular wall was . . | 2-4 m.m. |
| The circumference of the mitral orifice was . . | 11 ct.m. |

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| The breadth and length of the aortic and ventricular segments of the mitral valve respectively were, | 4 ct.m. × 3 ct.m.;<br>7 ct.m. × 7-10 m.m. |
| The length of the left ventricle from the attachment of the mitral valve to the apex was | 8 ct.m. |
| And from the aortic valve to the apex, | 8½ ct.m. |
| The circumference of the aortic orifice was | 8 ct.m. |
| The breadth and length of the aortic semilunar segments were | 28 m.m. × 16 m.m. |
| The thickness of the muscular wall of the ventricle was at the base, | 2 ct.m. |
| At the middle, | 13 m.m. |
| At the apex, | 8-10 m.m. |

### *Coronary Arteries.*

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| Circumference near origin, | 11 m.m. |
| Circumference of coronary sinus in the right auricle near its origin, | 25 m.m. |
| Circumference of a coronary vein near its entrance into sinus and for 4½ ct.ms. of its course, | 5 m.m. |

The endocardium and serous lining of the coronary arteries were spotted here and there with opacities, and the opening of the coronary arteries into the sinuses of Valsalva were rather more gaping than usual, while the lining of the aorta at the mouths of these showed evidences of endarteritis.

On *microscopic examination*, many muscular fibres from both ventricles exhibited well-marked granular fatty degeneration, and there was an evident increase of the interstitial fibrous textures of the heart.

The diagnosis of dilated hypertrophy of the heart, with regurgitation through the tricuspid orifice, from pulmonary emphysema and bronchitis, was made during life. The former condition may be verified by comparing the measurements given, with the dimensions of an average normal heart, according to Bizot, at page 440. The situation of the systolic murmur, together with the systemic venous engorgement, appeared to justify a diagnosis of the latter, but there was room to doubt its correctness, (1) on account of the disappearance of the bruit towards the close of life, and (2) because of the absence of a distinct regurgitant impulse in the distended cervical veins. The necropsy, however, explained these points satisfactorily. The very considerable serous effusion into the pericardium, together with the increasing feebleness of the cardiac systole, were sufficient to mask the former sign, while the enormously dilated right auricle was a physical obstacle to the propagation of the latter into the jugular veins.

An examination of the exact measurements of the heart, detailed in the account of the necropsy, shows, that while the pulmonary, mitral, and aortic orifices had an extent of valve exactly equivalent to the dimensions of the openings which it was necessary to close, the circumference of the tricuspid orifice exceeded its complement of valve by half a centimetre, and this deficiency is accounted for by a valveless interval measuring about five millimetres between the anterior and internal segments, thus (Figure 10):—A, is the anterior; I, the internal; and P, the posterior segment; while *a* is the valveless interval between A and I.

As the tricuspid and mitral are not so nearly circular as the pulmonary and aortic orifices, we cannot expect their diameters, as represented by the aggregate of the lengths of the different segments, to bear so mathematically exact a proportion to the circumferences of the former, as do the similarly estimated diameters of the pulmonary and aortic orifices to the latter. It is probable, nevertheless, that the length and breadth of the valves of the mitral orifice were sufficient during life to insure competency, and moreover the physical sounds of the heart gave no indication of mitral deficiency. In the absence of any signs of recent pericarditis, we must therefore assume that the systolic bruit heard during life, immediately to the left of the sternum and in the epigastrium, was significant of tricuspid regurgitation.

But again, the breadth and length of the tricuspid segments, from their hypertrophy, simultaneously with the rest of the heart, were probably sufficient to close the right auriculo-ventricular opening (except the valveless interval of 5 m.m.), provided cardiac systole was sufficiently complete. The presence of so slight a valvular deficiency as that between the anterior and internal segments would scarcely of itself be sufficient to produce a regurgitation capable of originating a diagnostic bruit, as the chink must have been still narrower during systole; if indeed we can regard this deficiency as an abnormal condition, for some, and among them great names, consider that a salutary and natural regurgitation sometimes takes place through the tricuspid orifice.

Dr Robert Adams (*Dublin Hospital Reports*, vol. iv.), commenting on a case of contraction of the left auriculo-ventricular opening, refers at page 437 to a statement of John Hunter's, that the valves of the right side of the heart do not so completely close the arterial and auricular openings as those of the left side, and then says, "I look upon this difference in the valves of the right and left sides of the heart to be a natural provision to allow of a partial reflex into the right auricle on those occasions when, from any cause, the passage of the blood through the arterial opening is retarded. Such a provision was absolutely necessary in the right or pulmonary ventricle, as various causes must momentarily retard the passage of blood through the lungs."

Mr Thomas Wilkinson King likewise supports this theory, in the *Guy's Hospital Reports*, Nos. IV. and XII.

Although few will now be found who credit these views, especially as regards a normal insufficiency at the pulmonary orifice, it is not improbable, that in a case such as the present some tricuspid regurgitation may take place and be natural, and presumably therefore salutary, in an over-distended state of the ventricle. The valveless space at the junction of the anterior and internal segments had doubtless been stretched to the extent of 5 m.m. by, and simultaneously with, the universal dilatation of the auriculo-ventricular orifice and the neighbouring chambers; but there must originally have been a break in the continuity of these segments at this point. We can therefore easily understand that in a similar case (and in all instances if this is a normal and constant condition) a temporary dilatation of the right heart, however caused, may in like manner produce a temporary gap at this point sufficient to permit a transitory regurgitation through this orifice, and, of course, that a permanent dilatation of these chambers would result in the establishment of a permanent gap and a persistent regurgitation.

Now as to the cause of the tricuspid regurgitant bruit clinically detected in this case, was it due to the over-distension by blood within it of a chamber weak in muscular fibre, or to engorgement of the coronary venous system, or to both? And what assistance in the elucidation of this point is given us by the action of digitalis in abolishing the bruit?

The greatly increased diameter of the muscular walls of the right ventricle would have led one to suppose that that chamber was supernaturally strong, had the textures not been submitted to a microscopic examination, which proved the condition to be really one of pseudo-hypertrophy, as a great part of the increase in the thickness of the walls was due to an excessive production of fibrous connective tissue. The latter, as the result of long-standing "congestion of the heart," was in itself a proof of coronary engorgement. Moreover, the fact of the right auricle, coronary veins, and right ventricle being intensely distended with blood at the necropsy, and likewise the fact of the right auricle and coronary sinus being in a state of persistent dilatation, argued that an over-accumulation of blood in the right heart and coronary veins was probably a more or less persistent condition. We must therefore infer that both the degenerate condition of the muscle of the ventricle, and the engorgement of the coronary veins, probably contributed to the over-dilatation of the right auriculo-ventricular orifice at the time when the tricuspid bruit was noted. That, however, the latter condition was principally operative in the establishment of permanent dilatation, is highly probable; for not only would the impeded coronary circulation exercise, as has been shown, a diastolic influence, but, by the production of an excess of intermuscular connective tissue, it would indirectly promote the ultimate degeneration of the muscular fibres, the systolic influence of which would, in their degenerate state, the more easily succumb to the dilating influence of the blood within the ventricle, and to that of the engorged coronaries. The presence of an excessive and active coronary engorgement at one period of the case, probably before the hypertrophied left heart had degenerated, may be inferred from the dilated and atheromatous mouths of the coronary arteries, and the patchy opacity of their serous coats.

The disappearance of the bruit under the influence of digitalis, and the simultaneous but transient relief afforded to the patient, further prove the dependence of the bruit upon imperfect systole, from the causes indicated. Digitalis, by squeezing the heart muscle, perfected the tricuspid valvular action, abolishing bruit, tended to assist the evacuation of the coronary veins, and to empty both ventricles and the coronary arteries, thus affording relief to the lungs, and promoting for the time an improvement in the action of other organs. If our physiological argument is correct, such a beneficial prolongation of the diastolic pause must signify an increase in the absorptive power of ventricular diastole, the existence of which we endeavoured to establish.

I shall now conclude this portion of the subject by briefly recapitulating the physiological and pathological positions which it has been my endeavour to maintain in the preceding pages. The physiological propositions were as follows:—

*A* (1.) That it is more difficult to propel a horizontal than a perpendicular circulation.

(2.) That the horizontal circulation of the sheep may be taken as a type of a difficult or impeded circulation in an upright animal.

(3.) That the provision made by nature for the propulsion of such a circulation is, THEORETICALLY, the true type of the most perfect compensation in a circulation obstructed by disease of the right heart in man; but that there are circumstances which preclude a beneficial result from the adoption in disease of the plan of this natural provision in its entirety.

(4.) That turgesence of the coronary circulation has an influence in the production of diastole, as demonstrated by Garrod's experiment.

(5.) That diastole is thus in part an active event.

(6.) That active diastole has an absorptive influence towards the diastolic chamber.

(7.) That diminution of the capacity of a chamber diminishes its absorptive power.

(8.) That cardiac systole and diastole in the manner explained in the context are mainly concerned in the propulsion of the coronary circulation, while the latter at the same time contributes, as already stated, a force in aid of the production of cardiac diastole.

The pathological propositions were:—

*B* (1.) That there are two classes of cases of valvular disease of the right heart, distinguished according to the order in which the pathological changes in the circulatory apparatus follow one another; that in the one, obstruction to the pulmonary circulation and hypertrophy of the right ventricle is the final, and in the other the initial event.

(2.) That the more perfect compensation is in the right chambers from accessory development, the less do the left chambers deviate from their normal condition.

(3.) That diminution of the capacity of the left ventricle by hypertrophy, in cases of dextral valvular disease, increases the embarrassment of the pulmonary circulation primarily, and of the systemic venous circulation secondarily.

(4.) That ventricular dilatation with imperfect systole is the cause of valvular insufficiency.

(5.) That active or passive engorgement of the coronary circulation is a force of the first importance in the production of permanent dilatation of a ventricle, which is in fact a condition akin to *persistent partial diastole.*

(*To be continued.*)

## ARTICLE VIII.—*Valedictory Address, delivered before the Obstetrical Society of Edinburgh, November 12th*, 1879. By DAVID WILSON, M.D., F.R.C.S.E.

IN retiring from the honourable position of President, to which, by your suffrages, I was elevated a couple of years ago, allow me again to thank you for the very great honour you conferred upon me on that occasion, as well as for all your subsequent kindness.

To preside over such a body as the Obstetrical Society of Edinburgh is an honour of which any one may well be proud, especially when we consider the eminent individuals who have occupied the position; and I shall ever retain a grateful recollection of your kindness in calling me to do so. At the same time I am well aware that it was not owing to any special services rendered by me to the obstetrical art or to the Society, as so many of my predecessors have done, but mainly, I believe, to the fact that I am one of the oldest members of the Society, and have always taken a deep interest in its prosperity. And this reminds me that the Society has now commenced its fortieth session, and consequently has existed for nearly a generation; and at one time I felt strongly tempted to contrast the present state of the obstetric art with what it was at the time the Society was instituted, but to do this in a thoroughly satisfactory way would require more time and leisure than are at present at my command. But without carrying out this project in its entirety, perhaps I may be allowed briefly to indicate, especially for the younger members of the Society, a few of the more salient points of contrast, and, I think I may assuredly say, of the great progress our art has made during that time, and conclude with a few remarks on the present position of the Society.

The period referred to has been one of unparalleled activity in all the departments of medicine; and in this midwifery has shared in not a less degree than the sister branches of medicine and surgery.

It was about the commencement of this time that that wonderful genius, Sir James Simpson, for so many years President of our Society, succeeded to the Chair of Midwifery in the University of Edinburgh; and to him, in no inconsiderable degree, was much of the progress during the earlier period due. To another distinguished man, also a late President of our Society, though now removed from us to a more extensive sphere, does our art owe a considerable debt of gratitude for his researches on subjects connected with it. I need scarcely say that I refer to Dr Matthews Duncan. Forty years ago the pathology of the female organs of reproduction was very limited, and confined nearly to the disorders of menstruation, leucorrhœa, polypus, prolapsus uteri, cancer, including cauliflower excrescence, ignoring altogether the important subjects of the versions and flexions of the uterus, cervical ulceration, endometritis, intra-uterine polypus, pelvic hæmatocele, peri- and para-metritis, subinvolution of the uterus, and many of the conditions giving rise to sterility, etc. etc. In fact, the means for the accurate diagnosis of some of these affections did not then exist. For at that time the uterine sound, sponge and tangle tents, hydrostatic and air dilators, the ecraseur, the exploring needle, the aspirator, the hypodermic syringe, and the use of the thermometer, had not been discovered or applied, and even the vaginal speculum was but rarely used. Need I remind you that to three members of the Society we are indebted for the discovery of several of these most valuable appliances — I refer to Sir James Simpson, Dr Keiller, and Dr Alex. Wood. How invaluable they all are for diagnostic or therapeutic purposes I need not tell you. Anæsthetics also—chloroform and ether, chloral, potassium bromide, ergotine, oxalate of cerium, etc. etc., and I think I may add antiseptics also, besides others of more doubtful value—were then unknown or unapplied. It is difficult now to conceive how we could get on without these important agents.

I need scarcely point out how completely revolutionized all surgery, not only ordinary but obstetric, has been by the discovery of chloroform. How divested of all horror every operation admitting of its use, including the every-day operations of turning and forceps, has become, and what an immense comfort it is to the operator as well as to his patient that the former should be enabled to proceed leisurely, and not be hurried or distracted by the sufferings or cries of the latter. In this respect, for diagnostic purposes alone, how invaluable chloroform is we have almost daily illustrations. I need scarcely mention that there is one condition—that of phantom tumour—the diagnosis of which is made by the administration of chloroform alone.

This leads me to refer shortly to the use of chloroform in ordinary labour. Had any one forty years ago predicted that a patient could be delivered without suffering or consciousness, he would scarcely have been believed, or the case would have been considered an anomalous one; and yet how familiar, indeed an everyday occurrence, is this to all of us now. I think sometimes we scarcely realize the importance of this most invaluable discovery, perhaps, next to vaccination, the greatest in the history of medicine, and certainly, so far as midwifery is concerned, attended with little, if any, disadvantage.

The merit of this grand discovery belongs to Sir James Simpson as unquestionably as does that of vaccination to Jenner, and his name will be ever associated with it; and were there nothing else than this, he might well be considered one of the greatest benefactors of the human race.

It is curious at this distance of time to recall some of the absurd objections urged against the use of chloroform in midwifery at the time of its introduction, such as that it was an interference with the primeval curse pronounced against woman, "In sorrow shalt thou bring forth children," and therefore that it was sinful to use it, as if man's daily endeavours were not a constant interference with the curse; but all these have long disappeared.

The only objection to its use in midwifery being what we are all acquainted with—the tendency it has when fully administered to diminish the force and frequency of the uterine contractions, and probably tending to post-partum hæmorrhage, which can be obviated, however, by suspending its action for a time, and allowing the patient to get out of it, or by mixing it with a third of absolute alcohol, as has been recommended, or administering subcutaneously a dose of ergotine. What a matter of thankfulness it is that, notwithstanding the immense number of times it has been administered, there has not as yet, so far as I am aware, been any death recorded from its use in labour!

In addition to the use of chloroform there are one or two points in the treatment of natural labour in which we differ in some respects from our predecessors, and which are worthy of a brief notice. But before doing this perhaps I ought to refer to the more accurate knowledge of the mechanism of parturition, natural and morbid, which, through the labours of Naegalé and others, has been more largely diffused throughout the profession than formerly, and without which, as has been said, all scientific progress in practical midwifery is really unattainable, and by which alone we are able to deal in a satisfactory manner with the more difficult cases requiring operative interference. In facilitating accurate diagnosis I need not say how invaluable chloroform is.

The first of them is with regard to the management of the third stage of labour, viz., in the pretty general adoption of the practice at the present time of compelling the uterus, if I may use the expression, to finish its own work of expelling the placenta by its contractions, by grasping and following down the uterus after the birth of the child, and to avoid all traction on the cord as was so commonly recommended formerly.

By this great improvement I believe the risk of post-partum hæmorrhage will be reduced to a minimum, and hour-glass contraction after delivery will be rarely, if ever, met with.

A second point is the more liberal treatment of the puerperal female after delivery so far as diet is concerned, instead of subjecting her to the rigid antiphlogistic treatment so much in vogue forty years ago. This is probably an improvement on the whole, though I must say I never saw any evil result from a day or two of somewhat limited diet immediately after delivery.

The last is the greater importance attached to securing the complete involution of the uterus by strict confinement to the horizontal position for a considerable period after delivery, to which we are inclined to attribute the great freedom in our own practice from subsequent uterine disease after labour as well as after abortion.

One of the most striking features of the midwifery of the present day, as contrasted with that of forty years ago, is the much greater frequency with which forceps are used at the present time with what they were then. This is well shown in the statistics of the Rotunda Hospital, where, out of a total of 16,414 labours during Dr Collins's mastership from 1826 to 1833, forceps were used in 27 cases, *i.e.*, once in 608 cases; and in the Royal Maternity Charity, out of a total of 48,996 labours from 1828 to 1850 forceps were used 73 times, *i.e.*, once in 671 cases; whereas in the Rotunda Hospital under Dr Johnston, out of 7862 cases from 1868 to 1875, forceps were used 752 times, *i.e.*, once in 10 or 11, and under Dr Lombe Atthill, from 1875, once in 14 in-cases and once in 29 out-cases. It would be absurd in any one to attempt to determine how often forceps ought to be used, but we cannot help thinking that, in Dr Johnston's practice, they were used too often and in some unsuitable cases, seeing his mortality from forceps and craniotomy combined amounted to 63, whereas that of Dr Collins's was 19, and that of Dr Ramsbotham only 9, though the number of Dr Collins's cases was fully double that of Dr Johnston, and that of Dr Ramsbotham six times greater. But notwithstanding this, I think most, if not all, of you will coincide in the very nearly universal opinion expressed at the late most interesting discussion on "the use of the forceps and its alternatives in lingering labour" at the Obstetrical Society of London, that the more frequent and early use of forceps when the head is in the pelvis is a measure in careful hands not only unattended with danger to mother and child, but really in many cases a humane and beneficial procedure for both, and attended by a considerable saving of time to the practitioner—not an unimportant consideration, for we can well remember cases in our early practice which could have been safely terminated by forceps hours earlier than they were in conformity with the ideas and practice then in vogue; and here we cannot avoid noting how much by his practice and writings our illustrious *confrère* Dr Hamilton of Falkirk has done to advance the more frequent use of the forceps where the head is arrested low down. None of us can have forgotten his most interesting demonstration at the Society last session, nor his marvellous success of “1371 successive births with only 3 deaths; in these there were 190 forceps cases with only 2 deaths, but, as Dr M'Donald pointed out at the time, “these cases, as a rule, are very simple.” On the other hand, it must never be forgotten that when the head is high up, at or above the brim, with an imperfectly expanded os, and especially if that be rigid, the application of forceps is not by any means an easy operation or one free from danger, and certainly not to be lightly undertaken or by other than experienced and skilful hands. Making every allowance for this, the day, I believe, has passed when any practitioner in the kingdom will be found whose forceps cases, like those of the late Dr Robert Lee, were only one-third of his craniotomy cases; and though we confess we never expect to see the dream of the late Dr Tyler Smith realized, there is no doubt that with the more frequent use of the forceps and turning in suitable cases, as advocated by Sir J. Simpson, craniotomy must become rarer and rarer; and we think that in a considerable number of cases a trial of one or other of these ought very generally to precede this distressing operation.

Here I may say a few words as to ergot. Whilst the sphere of the forceps has been more and more extended, that of ergot is becoming more and more restricted, at least in labour. Setting aside for the present its use in cases of hæmorrhage, where it is often of great value, its use is nearly confined to cases of uterine inertia in multiparæ, where the pelvis is known to be roomy, and where there is believed to be no obstruction, and where, if it fails to act satisfactorily, we can apply forceps. In cases where labour is delayed owing to rigidity of the os and cervix or premature rupture of the membranes, I ought not to omit to mention the great assistance often rendered by artificial dilatation either by the finger or dilators.

The relative merits and scope of the two operations of turning and forceps in contracted pelvis have led to much discussion, which is not by any means settled yet. At the same time there can be no doubt that version has succeeded in cases where forceps have failed, and is especially suited for cases where the head is loose and refuses to enter the brim, or when forceps cannot be easily applied. On the other hand, it is considered to be unsuited to cases of uniformly contracted pelvis, or where the head has become more or less fixed.

In these and in the minor degrees of contraction forceps are held to be more generally applicable, but the choice of the particular operation will, I have no doubt—as, I think, was suggested by Sir J. Simpson—depend a good deal on the dexterity of the operator as far as that operation is concerned. One who is expert at turning will naturally prefer that to forceps, and *vice versâ*.

With regard to craniotomy I have little to say, save that a considerable improvement of late years has been effected in its performance by improved perforators, and above all by the use of the cephalotribe in many of the cases, as has been well shown by Dr Keiller and others.

With regard to that truly conservative operation, the induction of premature labour, after a trial of a variety of means for effecting it, I believe the passing up of a flexible catheter to separate the membranes, and the completion of the operation by means of the hydrostatic dilators now pretty generally adopted, leave little to be desired. The sphere of the operation has been considerably enlarged by resorting to it in a variety of cases not originally contemplated—not only in the case of females who habitually give birth to children with large heads, but also in the case of those who have repeatedly given birth to dead children at the end of pregnancy, and where, by the induction of labour at an earlier period, a living and viable child has been born, as in cases brought before the Society by Drs Keiller, Hart, and others.

I may here mention the very great addition to our resources by the substitution of Dr Braxton Hicks's method of combined internal and external turning in lieu of the old operation. I need not say that this is invaluable in many cases, but here I may be permitted to mention that it was to the late Professor Hamilton and Dr Moir, one of our late Presidents, that we are indebted for first pointing out how easily in many cases turning can be effected, when the waters are undischarged, without the introduction of the hand into the uterus. This, however, does not detract in any way from the merits and value of Dr Hicks's method.

With regard to the great subject of ante-partum hæmorrhage, especially placenta prævia, always a most important and interesting subject to the obstetrician, very great advances have been made in its pathology and some in its treatment of late years, as was well brought out in the discussion which followed the reading of Dr Chas. Bell's most interesting paper on that subject. As some of these are still *sub judice*—viz., Sir J. Simpson's and Dr Barnes's proposals to separate the placenta wholly or partially—and as my personal experience has not been sufficient to entitle me to speak with confidence beyond expressing my belief that, when the hæmorrhage is considerable and the child has reached a viable period, the sooner pregnancy is terminated the better will it be both for mother and child, and that, when the os is at all rigid, plugging is the great resource. For this purpose there is nothing better than Dr Keiller's or Barnes's dilators, in not only helping to stay the hæmorrhage, but also in promoting the dilatation of the os. When this is effected, rupturing the membranes, turning, or other means of effecting delivery as may be deemed most advisable, can be had recourse to. With regard to accidental hæmorrhage, when the placenta is not prævia—for we are inclined to agree with those who consider many of the hæmorrhages of placenta prævia as really accidental in their nature—I believe the practice recommended when the hæmorrhage is not so great as to demand immediate delivery (as in those sad cases related by Professor Simpson), viz., rupturing the membranes and giving ergot or injecting ergotine, as in the cases brought before the Society in Dr Underhill's paper, is one that is usually followed by a successful result, at least to the mother.

As to post-partum hæmorrhage, I think you will agree with me that a most important practice in this, as in many other cases in medicine, is the preventive already alluded to of allowing the second stage to be slowly completed, especially in instrumental cases, and following down the uterus, so as to cause it to extrude the placenta. The practice adopted by many of administering a good dose of the liquid extract of ergot, or a subcutaneous injection of ergotine before the completion of the second stage, is, we think, a very good one, especially if there be any reason to fear an attack of hæmorrhage. When, unfortunately, severe hæmorrhage does occur, and milder remedies have failed, we cannot help thinking that a modification of the practice so strongly advocated by Dr Barnes—viz., the passing up a sponge soaked in the perchloride of iron solution into the uterus—would be a great improvement over the injection of this agent, as recommended by him, which has unfortunately been followed in some cases by fatal consequences. The value of this practice must therefore, in the meantime, be considered to be *sub judice.*

I may notice the great improvement of late years in the treatment of those troublesome cases of hæmorrhage following abortion in the early months, where part of the placenta or membranes is retained, and where the os is closed so that a finger cannot be admitted, as not unfrequently happens. When, by opening it up by means of a sponge or tangle tent, so as to get access to the source of the bleeding or discharge, and removing this by the finger or otherwise, we thereby relieve the patient from a position of considerable peril. This, of course, is equally applicable to all cases of hæmorrhage when it is intra-uterine, as was, I think, first put in practice by Sir James Simpson.

In connexion with the subject of hæmorrhage, the recognition of the phenomena of thrombosis and embolism, which has only taken place within the last forty years, deserves notice, and is almost the only important subject which has not come up for discussion before the Society during the last two sessions. I need not say how large a number of serious, nay, fatal cases of disease are referable to the occurrence of blood-clotting, whether local or transferred, and how much light it has thrown upon cases that were previously obscure. I suppose most of the sudden deaths after delivery may be referred to this category.

Hitherto, unfortunately, the practical results, so far as treatment is concerned, have not been great, but there is very little doubt that in the course of time the observation of the conditions giving rise to these diseases, which have been so clearly pointed out by the distinguished President of the London Obstetrical Society in his valuable papers on this subject, must ultimately tend to important results in the way both of prevention and treatment.

The important subject of puerperal eclampsia has naturally had a great deal of attention paid to it during the last forty years, and very great advances have been made in its pathology, as the discovery of albumen in the urine, etc. The latest, and not least, important of these was brought forward by Dr Angus Macdonald in his most interesting and valuable paper read before the Medico-Chirurgical Society here at a recent meeting. Of course, it remains to be seen whether Dr Macdonald's views are corroborated by subsequent observers; but if so, it will be the most decided advance on what is still confessedly an obscure subject that has been made since the discovery by Lever of the presence of albumen in the urine in cases of puerperal convulsions. As to treatment, there can be no doubt that the administration of chloroform and chloral have been improvements on the old plan of treatment by profuse venesection; but statistics are still wanting to show the amount of this; and the mortality being still very great, there is room for considerable improvement on this point.

With regard to puerperal fever, or septicæmia, as it is now perhaps more correctly denominated, most important advances have been made of late years in the pathology and etiology of this justly dreaded disease, which seems to be even a greater scourge in Germany than in our own country. Some of these were brought out in the discussions following the reading of Dr Baird's interesting communications to the Society. And though there are a number of unsettled points in its pathology, and still more in its treatment, requiring clearing up, the knowledge which has been attained of its connexion with decomposing portions of placenta and other matters, and its frequent origin in the introduction of the cadaveric, erysipelatous, scarlatinous, and possibly other poisons, and the various ways in which these may be introduced into the system, are of the highest value in a preventive point of view. In regard to treatment, unfortunately, as in so many other cases, this has not progressed so much as our knowledge of the diseased actions; still there has been progress even here, especially from the frequent use of antiseptic injections of the vagina and uterus, which, in some cases, appear to have been of the greatest value. That this disease has occasionally followed the steps of individual practitioners while their neighbours have been free from it, there can be no doubt, as the Society's records will show; and, unfortunately, the mischief has often been done before it has been suspected. This, of course, should lead to the greatest care on the part of the practitioner at all times in avoiding, as far as possible, all probable sources of mischief, and by disinfecting when this is unavoidable, as in the exigencies of daily practice sometimes must be. It is also believed, and we think correctly, that the disease is not unfrequently communicated through nurses, who, in some cases, are more likely to do so than even the accoucheur, and should be cautioned as to the risk. This leads me to remark that the Society at one of its recent meetings took up the consideration of the education of midwives, and unanimously agreed to the following resolution: "That the Edinburgh Obstetrical Society approves of the principle of the proper education, examination, and registration of midwives, and refers to the Council to take such action in the matter as they may deem advisable to carry out these views."

If deaths from puerperal fever were eliminated, I think puerperal mortality in ordinary midwifery would be very small indeed. Judged by our own experience, it would certainly be a vast deal less than what has been assigned by Dr Matthews Duncan as the normal mortality in child-bed; but even with the addition of fever cases, we cannot help thinking Dr Duncan has pitched it too high, and not sufficiently taken into account the circumstance that many of the deaths occurring within a month after confinement would have happened about that time whether the patient had been confined or not—*e.g.*, many cases of phthisis.

There are three subjects of obstetric surgery which I shall briefly mention, that forty years ago were really amongst the greatest opprobria of the medical, or rather the surgical art, and which are not only not so now, but are in reality amongst the highest triumphs of it. I mean fistulæ of the bladder and rectum, which, when of any extent,—such a case as that of the late Professor Gustav Simon, brought before the Society by Dr Duncanson,—were almost incurable, and the unfortunate subjects of which were, owing to their loathsome infirmity, excluded from society; also the cognate subject of lacerations of the perineum, in the cure of both of which our friend Dr Keiller has done good work; and last, though not least, ovarian disease. At the time I refer to, so far as I am aware, only four operations for the removal of diseased ovary had been attempted in Scotland, at least. In one of these no tumour was found, and in a second the operation could not be completed, and in the third the patient died a few hours after the operation, so that it is not to be wondered that the general opinion of the profession then, and for some time after, was that of the late Professor Syme, "that it would be very unjustifiable to repeat the operation, since for every life prolonged by it many must be sacrificed." Need I say how different this is from the actual state of matters now, where Dr Thomas Keith, to whom society and the profession owe a deep debt of gratitude for his labours in this department, out of his last fifty operations, performed within a period of less than two years, lost only two patients? Need we, then, despair of getting rid of almost any infirmity admitting of surgical interference? And here, perhaps, I may be permitted to congratulate Professor Simpson on having been the first in Scotland to perform, and that successfully, Battey's operation, or oöphorectomy, as it is now called. Probably the cases demanding the operation cannot be numerous, though I see two in the *Journal*. Still I think we may account it as a substantial addition to our resources and a gain to suffering humanity. But I must conclude; and perhaps I ought to apologize to you for taking up so much of your time with an account of matters with which most of you are familiar. Still, it is not without interest to take stock, as it were, from time to time, and record our progress; and though "there is still much ground to be possessed," you will agree with me that our art during the last forty years has been far from stationary, and that in this progress the Society, through some of its members, has been no inefficient agent.

As to lacerations of the perineum, I would inculcate the great importance of endeavouring in all cases to secure union by the first intention—which, I believe, can generally be done—by the immediate insertion of one or more metallic sutures.

That I have omitted many important subjects in which advances have been made I am well aware, and those noticed have been in a very discursive way. In fact, the more I have considered the subject the more am I struck by the great advances which have been made during the last forty years, and the impossibility of adequately discussing the changes that have taken place in the limits of such an address as this; but I prefer rather not to exhaust my subject than to exhaust you. At the same time, it would be unpardonable in me not to allude to some of the papers brought before you during the past two sessions, from which it will be seen that the Society, though getting old, is by no means "decrepit," but that, like the palm-tree, it is still bringing forth fruit in its old age; and this it owes, in a great degree, to the valuable labours of some of the younger members, whom I am delighted to see, and from which I augur a long career of usefulness for the Society and honour and prosperity for themselves. The first paper that I shall mention is that most valuable one by my able predecessor in this chair, my friend Professor Simpson, whose valuable address on Uterine Fibroids inaugurates the fifth volume of our Transactions, and which will not only maintain his well-deserved reputation, but must also be a valuable contribution to the history and therapeutics of an affection which was for a long time, I may say, beyond the pale of treatment. Without attempting to enumerate the many important papers and communications with which he has favoured the Society, as well as the great number of morbid specimens he has shown, I shall merely refer to his papers on Sterility and Primipara Placenta, as well as those on Dorsal Displacement of the Arm, on Head Flexion in Labour, and on the Use of the Volsella in Gynecology, as valuable contributions to these important subjects.

To Dr Macdonald, one of your vice-presidents, and whom I hope ere long to welcome to a higher honour, the Society owes a debt of gratitude for several interesting communications on important subjects; and I may specially refer to his very valuable papers on Dystocia depending on the Hydrocephalus of the Fœtus, and that on Hour-Glass Contraction in the first stage, as well as his case of Labour Complicated with Locomotor Ataxia, as well as for a number of interesting specimens he has favoured the Society with, as also for the light that his ever-increasing experience enables him to bring to bear on the subjects under discussion at our meetings.

To Dr Keiller, whose rare experience is ever of value, in addition to his valuable paper on Curettes and Curetting, which well illustrates his great caution and sagacity, the Society is greatly indebted for his most interesting Report of Cases treated in connexion with the New Maternity Hospital during its first quarter, which we welcome not only for its own sake, but still more as an instalment of "better things to come," so that the Society and the profession at large, we trust, may have the advantage of the many interesting cases occurring in that institution.

To three of the junior but rising members of the Society—viz., Dr Croom, Dr Hart, and Dr Underhill—are we indebted for valuable communications on important subjects. To Dr Croom for a paper on Retention of Urine in the Female, bringing before us a *resumé* of the causes of that common complaint; also for one on Rapid Dilatation of the Urethra as an aid to diagnosis, and one on the treatment of Senile Prolapsus. To Dr Hart for his most valuable paper entitled A Study of Two Mesial Vertical Sections of the Female Pelvis in their bearings on the Normal Support of the Uterus, Prolapsus Uteri, and the Mechanism of Ruptured Perineum, illustrated by sections of Pelvis, and also for one on the Bearings of the Shape of the Fœtal Head on the Mechanism of Labour. And to Dr Underhill for his papers on Accidental Hæmorrhage, already referred to, as also for those on Adherent Prepuce as a cause of Phymosis, and on the Structure of a Channeled Polypus. I can assure these gentlemen that the Society looks largely to them for maintaining by their contributions in future years its prosperity and usefulness. None of us can have forgot Dr Foulis's valuable paper on a subject on which he is so completely an authority as the Development and Structure of the Ovary, and we shall gladly await and welcome still further observations on this interesting subject.

To our late President, Dr Matthews Duncan, we owe an interesting paper, and our only regret is that he has not favoured us with more of his valuable communications in the present volume. I need scarcely assure him that any contribution of his will be gladly welcomed.

To our country Fellows who have favoured us with papers we are under a double obligation, not only for doing so, but also for the trouble some of them have taken in attending the meetings; and I am sure I only express your sentiments when I say we are always delighted to see them, not only at our ordinary, but also at our more social gatherings. These papers embrace the following:—

Dr Baird of Perth.—Case of Extra-Uterine Fœtation; Case of Puerperal Septicæmia; on Etiology of Puerperal Fever.

Dr Hamilton, Falkirk.—Demonstration on Use of the Forceps in Tedious Labours.

Dr R. Bell of Glasgow.—On the Use of Tarnier's Forceps.

Mr Porteous, Kirkcaldy.—On Forceps.

Dr Hamilton, Hawick.—Case of Placenta Prævia.

Dr Eyre, Hawick.—Case of Prolapsus of Gravid Uterus.

Dr Napier of Dunbar's case.

Dr Wilson of Huntly.—Case of Puerperal Convulsions complicated with Albumenaria.

Dr Nasmyth of Cowdenbeath.—Case of Prolapsus of Uterus complicating Labour.

Many of these papers were not only important in themselves, but led to most interesting and instructive discussions. That of Dr Hamilton of Falkirk, already referred to, occupied two nights, and extended on one occasion beyond what are considered "elders' hours" in Scotland.

To our Resident Fellows:—

Drs Carmichael, Craig, and Peel Ritchie, Drs Buist, Gordon, Allan Jamieson, Mr Watt, and last, not least, James Young, we are indebted for valuable work in the shape of papers on morbid specimens. It is to be regretted that a greater number of our resident Fellows have not favoured us with communications, but probably an excuse may be found in other and more urgent occupations.

To Dr Kirk Duncanson especially we are indebted not only for the paper on Vesico-Vaginal Fistula by Professor Simon, already alluded to, but also for an interesting case by Professor Schrœder of Berlin on the Condition of the Hymen and its Remains by Cohabitation, Child-bearing, and Lying-in, with the very valuable illustrations which accompanied it, which adorn the first part of volume V.

We are also deeply indebted to Dr Paul Mundé of New York for a very valuable paper on The Dull Wire Curette in Gynecological Practice.

To Mr Walley, of the Edinburgh Veterinary College, we have been indebted for the exhibition of two most interesting specimens. One of these was a case of Torsion of the Uterus in the Cow, analogous to the volvulus of intestine in the human subject. The other was a specimen of a Dicephalus Bispinalis Quadrupes Calf. I am sure you will gladly welcome future contributions from him.

Now, with a few words as to the present position of the Society as to membership, I have done. In the first session of the Society 38 members joined. Of these 13, I am happy to say, survive, including our friends Drs C. Bell and Moir. In the next session 14 joined; and of these 4 survive, including Drs Cumming and Burn. During the next five years only 8 joined. During the past two sessions the Treasurer informs me that the number of Ordinary Fellows has increased from 106 to 135 at the commencement of the present session. During the same period 1 member has resigned, 1 has been transferred to the list of Corresponding Fellows, and 2 have died. One of them was Dr James Cumming, a very promising member, who contributed more than one paper to our Transactions, and whose premature death is much lamented by all who knew him. The other was Dr Thorburn of Larkhall.

In the session 1877-8 there were added 11 new Ordinary Fellows, and, in 1878-9, 22—exactly twice that of the previous session. The number added during the past session exceeds that of any previous one by 9, and is even greater than the total number added during the presidentship of my honoured predecessor.

The Treasurer also informs me that the finances of the Society have greatly prospered. During these two years the Society not only published Vol. IV. of its Transactions comprising those of the three previous sessions, but in addition has sent to every Ordinary Fellow a copy of the Transactions of the past two sessions gratis; and all this has been accomplished without any diminution of the funds of the Society.

With regard to the work done, I believe I may say without exaggeration that it will compare favourably with that of any two former sessions, so that though personally I have contributed little to the Society's progress, which I cannot but regret, I am pleased to know that the Society is not in a less prosperous condition than when I assumed office. Gentlemen, allow me again to thank you most sincerely for all your kindness, and to assure you that I shall always look back on the period of my presidentship with unalloyed satisfaction.

# Part Second.

## REVIEWS.

*The Heart and its Diseases, with their Treatment: including the Gouty Heart.* By J. MILNER FOTHERGILL, M.D. 2d Ed. London: H. K. Lewis, 1879. Pp. 516.

THE first thing which strikes us, on looking through this really important and interesting book, is that the methods of physical diagnosis of heart disease are treated after a rather cursory fashion. The author seems disposed to attach less importance to the physical signs and the indications afforded by instruments of precision than the majority of modern writers do. Indeed, in his anxiety to show how much more valuable the general indications are, he allows his language to become somewhat unintelligible. For example, he says (p. 72), "The diagnosis in disease of the heart is not the end, but the beginning of the examination." What does Dr Fothergill mean by this? After the *diagnosis* is made we have only to pass to prognosis and to treatment, neither of which require a further examination than that necessary to establish a complete diagnosis. Surely the author does not understand by the term "diagnosis," as used in the sentence we have quoted, merely the first indication which the stethoscope gives; and yet this would seem to be his meaning, so far as we are able to follow his language. For example, let us take a so-called anæmic murmur heard in the mitral area. Surely Dr Fothergill would not consider his diagnosis complete when he had satisfied himself that there was a mitral systolic murmur. He would pass on to consider what evidence there was of organic change in the valve implicated, what amount of anaemia was present, etc., etc. Perhaps he might attempt to enumerate the blood corpuscles, or even estimate the amount of hæmoglobin they contained, if he could prevail upon himself to use the necessary instruments of precision. In short, before he completed his diagnosis he would have accumulated all possible information regarding the case, and would therefore require no further examination in order to form a prognosis or to initiate treatment. How, then, can "diagnosis" be "not the end, but the beginning of the *examination*"?[1]

We are much disappointed with the author's treatment of auscultation, particularly in reference to the arteries. It is curious that the bruits heard in various parts of the arterial system are so scantly noticed, affording, as they frequently do, important indications for prognosis (as in aortic regurgitation).

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[1] The italics are ours.

Then, again, surely there is something wrong in the sweeping statement that reduplication of the first and second sound "indicates that the ventricles do not act synchronously" (p. 48). Dr Fothergill can hardly seriously maintain such a theory in regard to the *second* sound, whatever he holds with respect to the first.

At page 67 we find the following remarkable sentence:—"In mitral obstruction the pulse is small, but regular and rhythmical; though George Balfour of Edinburgh holds that the pulse of mitral obstruction is very irregular, in which he is in disagreement with London observers." We fear Dr Fothergill will find himself at variance not only with George Balfour, but with Von Dusch (*Lehrbuch der Herzkrankheiten*, p. 213), Rosenstein (*Ziemssen's Cyclopædia*, vol. vi. p. 130), Gerhardt (*Lehrbuch der Auscultation und Percussion*, 3d ed., p. 296), Balthazar Foster (*Clinical Medicine*, pp. 103 and 320), and others, if he will take the trouble to refer to their works. Probably Dr George Balfour is not to be greatly pitied, for if he *is* in the wrong, it is at least in good company. His opinion is one which has been held by many of the best observers from the days of Elliotson (1830) downwards. Stokes, indeed, pointed out that irregularity is more an indication of weakness of the cardiac muscle than of any special valve lesion, and this view we know to be that both held and taught by Dr Balfour. But he holds, for various reasons which we have not space to state, that irregularity is more often met with in connexion with mitral stenosis than with any other valve lesion, and this opinion is shared, as we have seen, by many of the best observers. We cannot forget that the præsystolic murmur, so long taught in Edinburgh to be the only certain indication of mitral stenosis, has only in quite recent times been acknowledged in London to have any existence at all; and we venture to hope that a more extended clinical acquaintance with this form of disease will lead even London observers to take a more correct view of cardiac irregularity as an important indication of its existence than — according to Dr Fothergill—they at present do.

The third chapter ends with a carefully written essay on the sphygmograph by Dr B. Foster. It is curious that the cardiograph does not receive even a passing notice.

As we pass onwards in the book there is less to excite criticism. The style is bold and graphic, in some parts racy, and always interesting. Take, for example, the following quotation, descriptive of the advance which gout makes from generation to generation:—"The consequence (of the afflux of wealth) is that gout is becoming very common in the third generation of the successful merchant. The grandfather lived well, and died old, without ever having had a touch of gout, unless it was in the muscular pains which he called 'rheumatics.' The father lived well, probably knew nothing of doctors; swore at his rheumatism occasionally; had winter bronchitis; and died of aortic disease. The present representative of the family has attacks of articular gout, a great toe that occupies a good deal of his attention, and thickened knuckles—indeed, full-blown gout."

The book which Dr Fothergill has brought out is, notwithstanding its omissions, a very valuable one, and will take its place among the standard works on diseases of the heart.

## *Eyeball Tension: its Effects on the Sight, and its Treatment.* By W. Spencer Watson, F.R.C.S. London: H. K. Lewis.

Under the above title the author has published a tabulated account of some fifty cases of glaucoma met with in his own practice, with remarks. There is nothing essentially novel either in the views entertained as to the nature of this affection, or in the treatment adopted for its relief: both points have, however, received a thoroughly practical and unbiassed consideration, which makes this little book well worthy of perusal. The tables are carefully compiled, and, on the whole, good. Perhaps a little more attention might have been paid to the state of refraction in each case. V is put down in several cases, shortly, as = fingers, which, by reference to the list of abbreviations, we find to mean "ability to count fingers." This is, to say the least, rather indefinite; an approximate idea of the distance at which the fingers could be counted might have been noted. The author is disposed to look upon a "modified mechanical theory" as that most suited to explain the increase of tension in the eyeball. He says: "An abnormal rigidity of the sclerotic is, according to my view, a predisposing cause of the disease, rather than its actual basis; and the loss of distensibility of the lamina cribrosa is also an important factor in the actual outbreak of the acute, and in the continuance of the chronic form of the affection." And again: "The causes of increased volume of the contents I hold to be (1) either hypersecretion of vitreous fluid, or (2) obstruction to the outlets, whether of the venous or lymphatic channels. The hypersecretion, he goes on to say, may be either inflammatory or from nerve irritation. Mr Watson, therefore, guards against a very common too exclusive adoption of the mechanical theory, which, however competent an explanation it may offer of the etiology in cases of secondary glaucomatous tension, is, in our opinion, utterly inadequate to account for either the acute or simple form of ordinary glaucoma. Mr Watson generally performs iridectomy, in the execution of which he follows the rules set down by v. Græfe. In certain cases he gives the preference to sclerotomy according to the method recently introduced by Wecker. These are (1) some cases of absolute glaucoma, in which the iris is wasted; (2) cases in which an anæsthetic is inadmissible; (3) where there is total loss of vision; and lastly, where there is eczema of the head and face. He also recommends Dr Argyll Robertson's operation of trephining of the sclerotic in some cases of glaucoma absolutum. He is, we think, a little too sanguine about the improvement of vision resulting from operative interference, although he very properly ascribes a considerable share of any improvement to the clearing away of the smoky-cloudiness of the dioptric media (we should have said of the cornea, inasmuch as the disappearance of the cloudiness is almost instantaneous). We miss any reference to the condition before and after operation of peripheral vision. This is, however important, especially in cases where the limitation of the field of vision has seriously encroached upon the point of fixation. Mr Watson confirms the recent statements of Schweigger, Wecker, and others, as to the benefit to be derived from the use of eserine in glaucoma, and considers this treatment especially valuable in chronic cases. With reference to the name "eyeball tension" instead of glaucoma, we agree with the remark made in the preface, "I hardly expect that my humble protest against the word will have much effect in driving it out of use." A term signifying increased resistance would have been preferable. Although there are, therefore, in Mr Watson's work some minor points to which we may take objection, he has published a short treatise of glaucoma in many respects superior to some of the more elaborate works on the same subject.

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*Clinical Notes of Twelve Cases of Ovariotomy.* By DONALD M'LEAN, M.D., Professor of Surgery, Michigan.

IN this reprint from the *Transactions of the Michigan State Medical Society*, Professor M'Lean gives a clinical record of twelve ovariotomies. One naturally turns first to the table of results. This is by no means very brilliant, as the mortality is fifty per cent. Two or three of the cases were malignant, however, and this should be taken into account. It is not stated in all the cases whether or not antiseptic precautions were used; and the necessity for the evacuation of putrid pus and peritoneal irrigation in some looks suspicious. In case 10, the conditions are explainable on the supposition of malignant peritonitis. Dr M'Lean, curiously enough, seems ignorant of Dr Foulis's researches on the diagnosis of this condition by the examination of the abdominal fluid. In all, the after-treatment seems to have been judicious. It is easier, however, to keep out putrefaction than to eradicate it when it occurs.

*Transactions of the Grant College Medical Society of Bombay.* No. III. Bombay: printed at the Dufter Ashkara Press. 1879.

In the number of this Journal for May 1878 we gave a general sketch of the history and state of Grant Medical College, and alluded to defects which still existed or were in prospect of removal. We directed attention to the methods, inappropriate to the circumstances at Bombay, of the examinations for the University degree of licentiate in medicine and surgery; but as this is a question for the Senate of the University, it naturally has no place in the more recent College Reports which are now before us. The removal of the subsidiary vernacular classes from Grant College, which was in contemplation at the time of our former notice, has since been effected. A subsidiary medical school was opened at Poona, in December last, in connexion with the David Sapoon Hospital, and was named the Cyramjee Jejeebhoy Medical School, in memory of a gentleman who had contributed largely towards its endowment. We learn from the inaugural address of the Governor, Sir Richard Semple, on the opening of this school, that the "students in this school were henceforth to receive their education in English." Arrangements for the formation of a similar school at Ahmedabad, in the province of Gujerat, are, we believe, in progress. The embarrassments from overcrowded class-rooms and laboratories, from distracting aims, which have been thus happily removed by the energy of the present Governor of Bombay, will doubtless bring back Grant Medical College to the high purposes for which it was originally designed and established.

The Grant College Medical Society is one of those medical societies that are doing excellent work. It consists of members of the medical profession who received their diplomas in the recognised colleges of India and Europe. It meets once a month during the session, commencing in July and ending in April; at each meeting a paper or papers upon subjects previously announced are read, and all points relating to cases and preparations of interest are submitted. It is a law of the Society that all members shall in rotation contribute a paper on medicine, surgery, or the collateral branches, but this in no way interferes with other members sending in papers as often as they may desire. On these communications free discussion takes place. This law secures that all the members take an interest in the work of the Society.

The Society publishes an abstract of the proceedings of the meetings monthly, and from time to time they publish Transactions. These Transactions are simply the ablest communications which have been read to the Society, and have been considered by the committee of management worthy of being so published. The proceedings of the Society from February 1877 to February 1879 have been sent to us, and we will review them in next number. What follows has reference to the Transactions.

No. III.—This volume contains thirteen papers by nine different authors. The subjects treated embrace a great variety of topics, and the able manner in which they are discussed shows that this Society contains many distinguished members of our profession.

The first paper is on "A New Indian Remedy," by Mr Náráyan Dáji. This "new remedy" consists of the bark *Ailanthus excelsa*, Roxb., a tree common in several parts of India. It is a large tree, with smooth, ash-coloured bark. The author gives a minute description of the natural history of the drug, and also a chemical analysis of the bark. Its active principle he regards as an acid, called by him *Ailantic Acid;* it is very bitter, and appears to contain the active principle of quassia. It appears to be an excellent bitter tonic, and may be substituted for quassia. He recommends it in dyspepsia, anorexia, diarrhœa, and cholera. He also found it of considerable benefit as a febrifuge in intermittent and remittent fevers. The second paper is on a "Fatal Case of Suppression of Urine," by Mr Luccaram Arjoon, the able author of the *Catalogue of Bombay Drugs* which we recently noticed. The case is very interesting, and is well reported. The third and sixth papers are by Mr Khory, the secretary of the Society. The former of these is an able and interesting article on the "Evils arising from the Ignorance of Native Midwives in Bombay." The author concludes by recommending that the Government should provide that midwives be trained in connexion with the Obstetrical Institution, and certificates given after a period, if found qualified to practise as midwives. He says, "These will displace in time the present *dáis*, who are nothing more than murdering quacks." His second paper is on "An Obscure Case of Eruptive Fever." The fourth and twelfth papers are by Mr Shansovan Vittul. His first paper is a very interesting case of "Extra-Uterine Pregnancy." His second is also very interesting, and is an account of a tumour in the brain. The fifth and eleventh papers are by Mr Lisbod, the President of the Society, the former of these papers being on "The Treatment of Jaundice with Luffa amara," a plant belonging to the Cucumber family. It seems that the fruit is extensively used by the natives for the cure of jaundice, and Mr Lisbod tried it in several cases with great success. His second paper is on "The Treatment of Leprosy with Bauchee." This paper will be read with great interest and profit by those who make a special study of this remarkable disease. Bauchee is a native medicine obtained from *Psoralea corylifolia*, Linn., a plant belonging to the Leguminosæ. The part used is the seed. This medicine, we are told, "is well known to natives, and has been used by them from the earliest ages in scaly eruptions of the skin, and especially in leucoderma." The author only tried it in three cases, but his experience confirmed the generally received opinion of the natives that it is a valuable medicine in the treatment of leprosy. The seventh paper is "Notes on a Case of Detachment of the Retina," by Mr

Da Gama. The next two papers are by Mr De Andrale, and both relate to venereal diseases. These papers are able communications, and contain much valuable information regarding the treatment of those diseases in India. The tenth paper is by Mr Continho on the "Treatment of Jaundice with Balsam of Copaiba." This is one of the most interesting communications in the whole volume, inasmuch as it is another valuable testimony to the great power of copaiba as a diuretic in diseases of the liver. We question if any medicine be equal to copaiba as a diuretic in affections of the liver, and the experience of Mr Continho fully corroborates this view. He treated numerous cases of jaundice with copaiba, and he found that under its use the urine becomes copious and lighter in colour, and the stools gain gradually their natural yellowishness. The last paper is by Mr R. J. Nadersha, on the "Treatment of Neuralgic Dysmenorrhœa" with the roots of *Abroma augusta*, a plant belonging to the same order as the chocolate plant. This root is highly recommended by the author as well as by other Indian physicians, with the very best results in the neuralgic forms of dysmenorrhœa.

The Transactions of this Medical Society reflect great credit on its members, and show that these native members of our profession are deserving of all praise both for their acute observations, and also for the manner in which they are recorded.

# Part Third.

## MEETINGS OF SOCIETIES.

### MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

#### SESSION LIX.—MEETING II.

I. *Dr W. Allan Jamieson* exhibited a patient, a young man, aged twenty-two, with MORPHŒA affecting large areas of trunk and limbs, five or six patches of alopecia areata on head, and canities of chin. He was of healthy parentage, and there was no sign or suspicion of syphilis. Both the morphœa and alopecia began at the same time, in the end of June 1879. Two nearly symmetrical patches of morphœa occupied the outer sides of each flank, extending into the umbilical and hypogastric regions, down over the groins, and reaching to some distance below the crest of the ilium, on the outer aspect of the thigh. There were white, smooth, punctated, oval areas, having a lardaceous appearance, the skin feeling slightly denser than normal, duskily pigmented parts, with lighter spots rained over them, and parts faintly violaceous. The patient said the lilac preceded the white alteration in point of time. There was a large violaceous patch behind over the sacrum, and numerous smaller ones above and round it: here the skin seemed atrophic. There were many delicate lilac spots on each side of the spinal column, roughly corresponding to the emergence of the posterior branches of the spinal nerves. Some, again, followed the course of the intercostal nerves, and patches having a longitudinal course occurred on the outer side of the arms, and back of thighs and legs. Sensation both to pricking and heat was normal; no subjective sensations. Drs M'Call Anderson and Duhring had almost simultaneously reported cases of leucoderma, alopecia areata, and canities, but the only example of morphœa associated with the two last named which Dr Jamieson could find, was one by Dr Gibney of New York, in the April number of the *Archives of Dermatology*. Mr Hutchinson had recently insisted on the neurotic origin of morphœa, on the manner in which the patches followed more or less regularly the nerve distribution to the skin, and the analogy which it bears to herpes zoster. Alopecia areata is now almost universally admitted to be a neurosis, and in most cases is slowly recovered from. Morphœa, or Addison's keloid, allied to if not identical with scleroderma, also often in time passes away, scleroderma in the diffuse form sometimes, and even Alibert's keloid, with perhaps an exception when that new fibrous growth is developed in the cicatrices of burns. With reference to its neurotic origin, therefore, the case was interesting.

II. *Dr Heron Watson* showed several pathological specimens. The first was a LARGE MASS OF OMENTUM removed from a case of incarcerated inguinal hernia, occurring in a middle-aged man; symptoms of strangulation having set in, and there being impossibility of reduction, he therefore operated, finding, as he expected, a large mass of omentum and a small knuckle of bowel: the latter he returned, but the former, being œdematous, could not be reduced without unjustifiable violence. He therefore, as he had done previously on various occasions with good results, transfixed the constricted portion, ligatured it with catgut, and cut it off, returning the stump within the abdomen. This was the largest amount he had as yet removed, weighing an ounce less than a pound. The patient, he was glad to state, had done well.

The second was a case of FRACTURE OF THE ASTRAGALUS. A joiner cleaning windows lost his hold, and leapt a height of forty feet to the ground. His left ankle was swollen to an extent which obliterated its normal prominences: above and behind the internal malleolus a hard immovable osseous prominence could be felt, which seemed to form no part of the tibia. In order to effect adjustment, an incision on the inner side of the tibia exposed the bone, and extended for half an inch below the malleolus; the tendon of the tibialis posticus was exposed displaced from its sheath, and lying upon the tibia. The osseous prominence behind and above the malleolus was extracted from its bed, and proved to be the posterior portion of the astragalus. The anterior part of the same bone, in front of the inter-osseous ligament, between the astragalus and os culcis, was felt *in situ*, but as it interfered with the adjustment of the foot and limb, was similarly seized, and dissected away from its ligamentous attachments. There was no bleeding. Two pieces of drainage tube were introduced at the lower angle of the wound, the tibialis posticus tendon was restored to its normal position, and retained there by a point of catgut suture. The external incision was closed by interrupted sutures. The incised wound healed by the first intention; drainage tubes were removed after the lapse of five days, and all discharge ceased by the end of a month. The limb was then put up in a plaster-of-Paris case, and the patient encouraged to move about on crutches.

Third, EPITHELIOMA of the under surface of the left half of the tongue, frenum, floor of the mouth, and mucous membrane covering the gum, removed by periosteum-peeling-instrument and thermo-cautery.

III. *Dr Andrew* exhibited the KIDNEYS, BLADDER, and PORTION of the INTESTINE which had been removed from a patient who had died in the wards under his charge at the Sick Children's Hospital. The following is a brief history of the case:—C. M., æt. 11, was admitted to the hospital on September 16th, complaining of abdominal pains varying in severity at different times, and of a gradual falling off in his strength, in consequence of which he had been obliged to leave his employment four months before his admission, and since that time he has been in bed more or less. For the last fortnight his bowels had been very loose, being moved five and six times in the course of the day. Family history: father and mother both alive and healthy; they have had five children, two of whom died under four years of age. When the patient came under my care the following was his condition:—The boy was small for his age; the skin dry, the fingers much clubbed, and the body badly nourished. The tongue was moist and coated, the bowels loose, the motions being light-coloured and very offensive. Pulse 96, temp. 97°, but it rose to 103·2° the same evening. On examining the chest, dulness was detected over both apices anteriorly, most marked on the right side; on auscultation the respiration was harsh and prolonged over the dull areas, and accompanied by a moist click at the end of inspiration; vocal resonance and fremitus much increased, especially over right side; over the rest of the lungs a few crepitations were heard, with an occasional sibilant râle on deep inspiration. Posteriorly the dulness was greatest over the left apex, and over both lungs the respiration was bronchial and the vocal resonance increased. He had slight cough, but no expectoration. Heart-sounds normal. The abdomen was prominent, and appeared elongated between the sternum and the umbilicus; the liver dulness extended from the upper border of the sixth rib to one inch below the ribs; dulness in the region of the spleen increased, but the tumour itself could not be felt, pressure in that situation, as also over the bladder, causing much pain. He complained likewise of pain at the point of his penis when he passed his water, urine 40 oz., clear; but there was a deposit of urates on standing. No tube-casts, blood, or pus corpuscles could be detected at any time; on the application of heat and nitric acid a small quantity of albumen was thrown down. The temperature presented the character which we usually meet with in cases of pneumonic phthisis, rising to 102° or 103° in the evening, and falling in the morning to 98° or 97°. The boy gradually got weaker and weaker, and died on November 30th, exhausted by the diarrhœa, which persisted in spite of all treatment.

*Post-mortem.* — *General Appearance:* body greatly emaciated, cheeks and eyes sunken; complexion dark brown. No glandular swellings. Fingers markedly clubbed; tight phymosis. *Examination of Chest.—Heart:* normal. *Lungs:* both firmly adherent to the parietes of chest and to the diaphragm; both about equally infiltrated throughout with caseating catarrhal pneumonic masses. No cavities; intermediate lung substance congested. *Kidneys:* left very much enlarged; weighed 13½ oz., with pus in it. Surface irregularly nodulated with small white patches lying under the capsule. On section, about an ounce of yellow purulent-looking fluid escaped from it. The whole substance of the kidney was beset with wedge-shaped caseous masses. Intermediate portion was of a bright red colour. Several large cavities and the calyces and pelvis of kidney were distended with the above-mentioned fluid. The ureter was of the thickness of the little finger, and totally obliterated throughout its entire extent. On section, its lumen was found to be occupied by a yellow caseous-looking substance. Right kidney healthy. *Bladder:* was friable, and presented on its mucous surface many large round-shaped ulcers, with red injected margins and rough nodulated floors. *Intestine:* ileum and large intestine showed many extremely well-marked phthisical ulcers. *Mesenteric Glands:* much enlarged and caseous. *Liver and Spleen* contained a few tubercular masses. Liver somewhat enlarged.

IV. *Mr Hamilton* showed a STOMACH which had undergone entire post-mortem digestion at the cardiac end.

V. *Dr James Carmichael* read a paper on two cases of LESION of the temporo-sphenoidal portion of the brain. In both cases the lesion was well defined, and limited to that part of the hemisphere corresponding to the three temporo-sphenoidal convolutions,—the region of the brain which Ferrier believes, from his experiments on monkeys, to be endowed with special sensation. In neither of the cases was there any evidence of abolition of hearing, or any other of the special senses. Many very similar cases had been recorded of late years, in which extensive portions of brain substance had been destroyed by disease, and yet there were no special symptoms, or an entire latency of symptoms, pointing to disturbance of brain function. The author referred to Ferrier's explanation of the apparent discrepancy between the teachings of experimental physiology and pathological observation, in which he suggested the bilaterality of brain function as the probable reason. The clinical history of the cases was then detailed, Case I. being a gangrenous abscess, as ascertained by post-mortem examination. The patient was a boy about thirteen years of age. Six years previously he received a blow on the head from the schoolmaster, and on returning home his mother found blood in small quantity escaping from the external aural meatus of the right side. This afterwards became purulent, and continued till the day of his death. The boy died, after six days' illness, without any special cerebral symptoms, but intense headache and some intolerance of light. Case II. was one of extreme interest. It was that of a boy nine years of age, and the disease in this case was a neurogliomatous tumour. The patient was an otherwise healthy and intelligent boy. The case was not diagnosed as one of organic cerebral disease at all, being without symptoms of any kind, excepting transient seizures of an epileptiform nature, which were reported by the friends, but not witnessed by any of the physicians who saw the case. The feature of most interest in this case turned out to be the morbid anatomy of the disease as worked out by Mr D. J. Hamilton, who found the tumour to consist essentially of peculiarly developed cells of the connective-tissue type. From the periphery of these cells arose numerous fine processes, which anastomosed with those from neighbouring cells, and formed a fine reticular intra-cellular network. Every here and there throughout the tissue were found much larger cells of a similar character, which might truly be termed giant cells. So far as known, these had not been before described.

*Mr Hamilton* said that since the report on the tumour was written he had discovered within it another kind of cell, a specimen of which was exhibited under one of the microscopes. It might truly be called a "giant cell," being from twenty to thirty times as large as a coloured blood-corpuscle. It was rounded in shape, and from its periphery numbers of processes radiated, which could be traced through from five to six fields of a Hartnack microscope magnifying three hundred diameters. It had essentially the same characters as the smaller cells described in Dr Carmichael's paper as constituting the bulk of the tumour, but was very much larger, and its processes were coarser and more fibrous in character. The processes, shortly after leaving the cell body, branched and anastomosed, forming an extremely wide mesh-work. The name "giant spider cell" might in truth be applied to it.

In reply to what Dr Clouston had asked, he believed that the tumour had arisen from all the connective tissue elements in the neighbourhood, more especially from the cells of the neuroglia.

In every feature it was markedly of a connective-tissue type. The intra-nuclear and intra-cellular plexuses described ran in certain instances for some distance into the cell-processes, and no doubt were the cause of the many shapes which the cells presented.

*Dr Clouston* remarked that the sudden death of the patient in whom the sarcoma of the brain was found, was not an uncommon mode of termination in all classes of brain tumours. He regarded the new process of preparation used by Mr Hamilton and the results in this case as being most important, and likely to lead to futher discoveries in brain pathology. The appearances described by Mr Hamilton in this case were in his opinion entirely new, and an important contribution to our knowledge. Those protoplasm-looking cells, and the fibrillar net which surrounded them, seemed to result from a real and most active process of "proliferation of the nuclei of the neuroglia," in this respect differing entirely from the usual proliferations hitherto described, which he looked on as mostly secondary and sequential processes consequent on previous disease in the bloodvessels or neurine itself.

*The President* inquired if Dr Clouston had observed rise of temperature in these cases of rapid fatal event?

*Dr Clouston* replied that he had not observed this.

*Dr James* said :—In Dr Carmichael's discussion all that I did was to ask if, in the various processes of the cells, a distinct prolongation of the fibrils of the intra-cellular and intra-nuclear network could be made out. Mr Hamilton replied that this had been done.

*Dr Buist* asked whether Dr Carmichael had observed the occurrence of albuminuria in the second case. It was to be regretted that there was so little clinical evidence of such lesions. The "nervous" attacks which had occurred so frequently were important, but not decisive, and reminded him of a case in which, along with albuminuria, there were intermittent attacks of speechlessness and spasm of the muscles generally, and where the cause of death was hæmorrhage into the cerebral ventricles.

*The President* remarked that he had seen the boy once in consultation with Dr Carmichael; and although the case was an obscure one, the only conclusion he could come to coincided with Dr Carmichael's opinion, that the boy was the subject of peculiar epileptic seizures. The case was one of much interest, and Dr Carmichael had related it very fully.

*Dr James Carmichael*, in reply, thanked the President and other members for their criticisms of the paper. He was glad to find that Dr Clouston agreed with him as to the probably epileptiform nature of the seizures in Case II. The case throughout had been very obscure, and the symptoms during life entirely negative in the direction pointing to any organic cerebral lesion. In regard to Dr Buist's query, the urine had been carefully examined, and found quite normal.

VI. *Dr Wyllie* read a paper by Dr Lucas, entitled, IS CUTANEOUS ALIMENTATION EFFECTIVE?

*Dr Allan Jamieson* said that in addition to the apt comparison of Dr Lucas's ideal baby to Tantalus, as suggested by Dr Carmichael, it would, it seemed to him, suffer the same fate as the horse did whose master reduced it to a straw a day. With respect to the absorptive power of the skin, the horny cells of the epidermis sheathed its mucous layer in a species of plate-armour vulnerable only at two points—the sebaceous and sudoriferous glands. Of these the sebaceous were the most active agents in any absorbent action which went on, for it was chiefly those substances miscible with oil which were taken up through the skin. Neumann's experiments on the mode in which inunctions of unguentum hydrargyri were effective sustained this view. He found particles of mercury even in the deepest parts of the sebaceous follicles, especially those which opened free on the surface, but also in those connected with hairs. In the sudoriparous glands, on the contrary, mercury was only found in the mouth, or but a little way within the duct, never in the coiled-up part. The production of tar comedos, and subsequent excretion of their derivatives by the urine after applications of tar to the surface, was similarly explained. The only watery solution absorbed, so far as he could recollect, was infusion of digitalis, when applied to the abdomen in dropsies. When oil alone, as codliver oil, was rubbed into the skin, its chief action was to limit evaporation from the surface and maintain the heat of the body. In this way, by preventing waste, it aided nutrition in cases of emaciation.

*Dr Black* remarked that it would be unlikely, on physical principles, that milk and soup could be absorbed by the skin, as they were about the same specific gravity and quality as the blood. Absorption could probably be only effected on the lines of endosmosis and exosmosis, that is, where there existed a marked difference between the nature and relative weights of the internal and external media. He could fully confirm the statements about the absorption, however, of codliver oil by the skin, as he had employed the method of inunction with it in cases of phthisis. He thought it likely that gelatine in some form could be introduced into the system in a similar way as a nutrient.

## OBSTETRICAL SOCIETY OF EDINBURGH.

### SESSION XXXIX.—MEETING I.

*Wednesday, 12th November* 1879.—Dr WILSON, *President, in the Chair.*

Mr S. Rothnie Adams, M.B., and Mr Hamilton Wyllie, M.B., were admitted Ordinary Fellows.

I. *Dr Wilson* showed the STOMACH and INTESTINES from a slightly PREMATURE CHILD which only lived eight days. The stomach was much enlarged, and a peculiar constriction existed at its middle. The intestines were very contracted, and had the appearance of large worms. The child never had free evacuation of the bowels, in spite of repeated doses of medicine. It almost immediately vomited its milk.

II. *Professor Simpson* exhibited TWIN FŒTUSES of six months utero-gestation. One had been dead for some time. They had evidently been developed from a single ovum; the amniotic sac and the chorion were double. It was interesting to observe the difference in the appearance of the placental area of the living child compared with the one which had died.

III. *Dr Underhill* exhibited CLOVER'S CRUTCH, an apparatus for facilitating operations about the anus or vagina, more especially where sufficient assistance was not at hand. The contrivance was so arranged by a crossbar and rings for the legs, to which was attached a strap which passed round the neck, that the limbs were fixed in the lithotomy position.

IV. *Dr Croom* showed a pair of FORCEPS invented by Mr Hilliard, surgical instrument maker, of this city. By a second handle, attached to a crossbar connected with the handle, traction could be made in the same direction as with Tarnier's forceps, for which they were intended as a substitute.

V. *The President* then delivered his valedictory address (see page 629 of this Journal). In an able and graphic discourse he reviewed the progress made in obstetric science during the last forty years, and concluded by enumerating the papers read and the general work done by the Society during the period of his tenure of office.

*Dr Keiller*, in cordial and complimentary terms, referred to the valuable service rendered by Dr Wilson to the Society during his tenure of the presidential chair, and congratulated him on the very excellent and elaborate address which he had just delivered, an address excelling in its exhaustiveness all previous communications he had heard from the chair. He was glad Dr Wilson had referred to the great services rendered to the Society by the late lamented Sir James Simpson, who from the earliest period of the Society's existence had taken such an interest in its welfare. He called on Dr Charles Bell, the oldest member present, to propose a vote of thanks to the President.

*Dr Charles Bell*, in complimentary terms, then proposed a cordial vote of thanks to the President.

*Professor Simpson* heartily seconded the motion, and shared most cordially in the general feeling of admiration expressed at the able address of Dr Wilson, which was indeed a most valuable *résumé* of the subject. The motion was carried by acclamation.

VI. *Dr Halliday Croom* then read a REPORT OF CASES treated in the Royal Maternity and Simpson Memorial Hospital during the last three months.

*Dr Wilson* thanked Dr Croom for his report.

*Dr Keiller* made some remarks regarding the probable source of infection in the fatal cases recorded. He thought the nurses were too numerous, and the sleeping arrangements for them were unsatisfactory.

*Dr M'Raild* made a few observations, and the discussion closed.

# Part Fourth.

## PERISCOPE.

### MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By Angus Macdonald, M.D.

A Case of Sudden Death of the Mother at the End of Pregnancy, with Post-Mortem Section and a Living Child, is recorded by Dr Storch of Copenhagen in the *Centralblatt für Gynäkologie*, No. 25, 1879. The patient suffered for some time from albuminuria and œdema of the lower extremities, was 30 years old, a primipara, and had several years ago suffered from rheumatic fever. Her circumstances were comfortable. Towards the end of her pregnancy the patient complained of breathlessness and general disturbances, with much restlessness. The only indication of cardiac disease was a weak systolic murmur audible over the aortic valves; there was much hydramnios. The patient was suddenly seized with a fit of coughing and intense dyspnœa, during which she sprang out of bed, and seated herself in a chair in a condition of intense cyanosis. An attempt was made to give relief by venesection, but no blood would come. A few seconds afterwards she died. About 8–10 minutes after death Cæsarean section was performed, and a well-developed male child removed. The entire operation lasted about half a minute. The child was pale and relaxed. Dr Storch, however, perceived a feeble and slow pulsation in the cord, about 70 beats in the minute. The cord was speedily tied, and persistent efforts at resuscitation continued for an hour and a half, the methods employed being the rhythmical blowing of air into the chest through a silver catheter, alternating with Schultze's method of artificial respiration. These were followed by complete success, although a full half-hour passed before the child made its first feeble spontaneous inspiration.

[The case is extremely important, as helping to determine how long after death of the mother a living child may be removed.—A. M.]

A Case of Sudden Death in Childbed from Mitral Stenosis, with Pulmonary Œdema, was reported by Dr Mann at a meeting of the Obstetrical Society of New York, 5th

November 1878. The patient, a lady of twenty-five, was the subject of rheumatism at eighteen. At an advanced stage of her pregnancy she had a sudden and severe attack of dyspnœa, accompanied by cough and expectoration of mucus and blood. The pregnancy persisted, however, and a tedious labour without anæsthetic was completed without inconvenience from the heart. But an hour after the birth an attack, similar to the one above mentioned, and again, fourteen hours afterwards, a third, came on and proved fatal. During the discussion which followed reading the paper, Dr Gillette remarked that a crippled heart in the second stage of labour was a prominent indication for chloroform, and said he could conceive of no form of cardiac disease that would deter him from using it under similar circumstances. Dr Skene believed that there were dangers to the heart both in giving and in withholding chloroform, but that the greater was avoided by its administration in such cases.

HYDRATE OF CHLORAL AND BROMIDE OF POTASH ENEMATA in the vomiting of pregnancy are highly recommended by Dr D. B. Simmonds, Yokohama, in the *American Journal of Obstetrics* for April 1879. He states that he as well as the other Japanese physicians have had repeated trials of the remedy, and are convinced of its great value, and suggests its use in vomiting due to other causes. In some cases he thinks the drugs must be pushed to a moderate degree of narcotism in order to secure the desired result. The dose usually employed by him was 20–30 grains in gum water.

HOW DILATATION OF THE URETHRA CURES CYSTITIS IN THE FEMALE is attempted to be explained in the *American Journal of Obstetrics* for April 1879, by Dr Parrish of Portsmouth, Va. He points out that spasm of the urethral sphincter, a not uncommon affliction of the hyperaesthetic female, induces its hypertrophy, and hence the aid of the abdominal muscles becomes necessary to expel the contents of the bladder. As the vesical globe diminishes with the escape of urine in the act of micturition, the abdominal muscles gradually lose their effect, until a point is reached where the water ceases to flow although the bladder is not empty; and thus putrid urine is allowed to remain as an irritant in the cavity of the bladder. Removal of the cause is therefore effected by dilatation of the sphincter, in his cases, with the little finger, under ether.

DEATH FROM AIR EMBOLISM FOLLOWING AN ATTEMPT AT CRIMINAL ABORTION.—The facts of an important medico-legal case, which led to the conviction of a medical man of that city, are reported in the *Boston Medical and Surgical Journal* for 7th August 1879, by Dr J. C. Gleason.

It was urged in the evidence, that besides administering several drugs of repute as abortive agents, the accused must have had recourse to the injection of fluid into the cavity of the uterus; and the syringe by which the injection was alleged to have been given was found to have a defect, whereby air as well as water was drawn into the bulb and injected when it was put in action.

On examination post-mortem, the abdominal tumour was discerned to extend to the height usual in the seventh month of pregnancy. When the soft parts from the neck to the pubes were divided, frothy blood followed this incision in the region of the thorax. The heart and vessels connected were found empty and healthy. Lungs were red with frothy serum in the air-cells, and the pulmonary vessels distended with blood. The vagina and uterus were congested and abraded on their mucous surface; the membranes were separated from the wall of the uterus at one side, normally adherent on the other, and the placenta was partly involved in the separation. Small bright red loose clots were scattered over the exposed part of the interior of the uterus, while over the exposed placental area no clots protruded from the sinuses. The conclusion arrived at by the medical examiner and other medical witnesses was that death must have resulted from uterine interference, and was probably due to air embolism.

THE MEDICAL TREATMENT OF OVARIOTOMY CASES is the subject of a paper by Dr Bozeman in the *Medical Record* of New York for July and August 1879. Considering the vast improvement in the results of ovariotomy since the employment of such measures as Lister's antiseptic method, particularly in the hands of Dr Keith, the author thinks it is from a better and more general understanding of this and other important principles of practice that further diminution in the general mortality may be looked for, but that something in addition to antiseptics is required to insure further success in the class of adherent tumours, where the operation has been delayed and the health become infected.

He calculates that death results in about seven-eighths of all cases from shock, collapse, hæmorrhage, exhaustion, peritonitis, septicæmia, or pyæmia, and to a large extent within four days, and he inquires what conditions of the system before and after the operation favour death from the above causes, and how are these obviated. There is a morbid process underlying the development of ovarian growths, which leads to anæmia, always pernicious, and often marked by a well-preserved outward appearance of body, which determines the asthenic nature of whatever inflammations supervene. His conclusions as to treatment are, that we should strive to counteract the evil tendency of the general anæmia, remove the morbid growth before or as soon after emaciation appears as the diagnosis can be determined, and treat the inflammations by continuous support of the vital forces, leaving the attending fever to take care of itself. He denounces antiphlogistic measures, such as ice and cold water, as means of lowering temperature, and particularly applied over the abdomen, as Dr Thomas recommends, to combat peritonitis and septicæmia, since their depressing action on the heart is often so great and uncontrollable as either immediately to endanger life, or to impair the integrity of remote organs. He gives an account of nine cases, mostly aggravated, in which he operated with success in eight; and from observation of these he gradually arrived at the method of treatment which he advocates. Preparatory to operation, he tries to meet the principal dangers before enumerated by administering whatever nourishment can be easily assimilated by mouth or rectum, by regulating the secretions of the body, controlling nervous irritability, and invigorating the blood. He gives iron with salicin or quinine freely; and on the morning of operation ten grains of quinine with one grain of opium. After operation, as soon as the patient is removed from the operating-table, he introduces per rectum Squibb's compound liquor of opium ʒj with ten grains of quinine, and every six hours thereafter the same dose of quinine with half the amount of opium. The quinine is given with the view of controlling the rise of temperature. As food he introduces per rectum half a pound or more of mashed beef, with or without pancreatine; ingesta by the mouth are resorted to with caution, especially at the outset of treatment, otherwise time is lost.

## MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Treatment of Diphtheria with Benzoate of Soda. — Dr Letzerich has employed benzoate of soda in severe cases of diphtheria, as is recommended by Professor Klebs. The dose administered to children under twelve months was a teaspoonful hourly of a 5 per cent. solution for children of one to three years, the same quantity of a 7–8 per cent. solution, whilst to still older children, 8, 10, and 15 grains were given; adults received as much as 15–25 grains a day. In no case did any outward symptoms present themselves. The diphtheritic membrane was powdered with sodium benzoate, the local application being made every three hours in severe cases, and two or three times a day in less urgent ones. In every case the febrile symptoms were checked in from twenty-four to thirty-six hours, the temperature returning nearly to the normal. Dr Letzerich recommends the employment of this remedy in catarrh of the stomach and intestines, especially in unweaned infants, in whose cases he has employed it with marked effects. It is also beneficial in mycotic catarrh of the bladder.—(*Berliner Klin. Wochenschr.*, No. 7, 1879; *Cbl. f. Med. Wiss.*, August 9, 1879.)—*The Practitioner*, December 1879.

The Physiological and Therapeutical Effects of Salicylic Acid and its Compounds.—In an interesting paper Dr Moore sums up the recent advances in our knowledge of the physiological and therapeutic effects of salicylic acid. In *rheumatism* (1) its most beneficial effects are manifested in the more acute cases. In subacute cases there is less, and in chronic cases no advantage from its use. (2) It should be given in doses of not less than 20 grains every two hours to an adult. (3) Its use should not abruptly terminate on the subsidence of the pain and fever, but the interval between the doses should be more and more prolonged. (4) By its employment rheumatic fever may, in the majority of cases, be made a disease of hours instead of months, as it was formerly. (5) By the brevity of the febrile condition, the chances of the occurrence of cardiac complications are immensely diminished. In *typhoid fever* it is found (1) that salicylic acid and its salts have a decided beneficial effect in reducing the temperature, and therefore in decreasing the mortality. (2) That its tendency is to shorten the duration of the disease by its antiseptic properties. (3) That the salicylate treatment is equal to any other antipyretic form of medication. (4) That there is every reason to suppose that the salicylates, combined with the cold-water treatment, would excel all other methods. (5) That a large dose of one drachm of salicylate of soda acts better given at once than in divided doses. Such a dose is sufficient for twenty-four hours. In *diphtheria*, salicylic acid is a valuable agent, since it not only acts as an antiseptic, but also favours the effoliation of the membrane from the throat by increasing the secretions behind it, and thus tearing it off. It may be used either as a gargle, or internally, or both ways. It may also be employed beneficially in the form of spray, using a solution of the acid in alcohol and water, three grains to the ounce of fluid. The internal use of the salicylate should also be insisted upon. In *diabetes mellitus* the salicylate of soda, given daily in doses of 120 grains, determines a decided diminution in the sugar excreted. The diminution of the saccharine element is liable to considerable variation, according to the class of case, but it is more remarkable by the greatest restriction of carbohydrates in the diet. Diminution of the quantity of urine is parallel with the diminution of sugar. Salicylic acid and its compounds have also been used with more or less success in the following diseases:—Smallpox and scarlatina, dilatation of the stomach, mycosis œsophagi, yellow and intermittent fevers, pertussis, rheumatic iritis, neuralgia, dysentery; in ear diseases, in empyema, cystitis, and pyelitis; in venereal diseases, pyæmia, erysipelas, surgical fever, etc.; and as an anaphrodisiac, in addition to its use in surgical practice. (*New York Med. Journ.*, July and August 1879.)—*The Practitioner*, December 1879.

PHYTOLACCA DECANDRA IN MASTITIS.—Further evidence of the value of this plant in mammary inflammation is given in the *Medical Biweekly*, 27th September, by Dr Wm. F. Holt of Ga.

He gives this case. On the night of November 12, 1876, I was called to see Mrs A. B., in labour with her third child. Nothing unusual occurred, and on the following morning the labour successfully terminated. On visiting her the third day my attention was directed to the hard and painful breasts; her mind filled with gloomy forebodings, as she informed me that in both of her previous confinements they had caused her intense suffering, and had to be lanced several times, and that her convalescence was slow and tedious. Upon examination I found both glands filled with several hard nodules, and very painful. She stated that previously she had used various plasters that had been recommended, and that belladonna, both in the form of ointment and the fluid extract, had been used. I at once ordered her to take five drops of the fluid extract of phytolacca decandra every three hours until its constitutional effect was produced, and then to suspend its use or lengthen the intervals. I confess that my faith in the remedy was not very great, but it was the only one at my command. She faithfully carried out my directions, and in a few days all traces of the inflammation had disappeared. The same lady was confined again in 1878; the same symptoms presented themselves, and were again promptly relieved by the phytolacca decandra, administered as before. I could produce several more cases from my notebook, showing the good effect of the remedy, but as *all* were attended with similar results I deem it unnecessary. Dr Chas. H. Hall of this city informs me that he uses the fluid extract as a local application to the gland, in addition to giving it internally, and that it rarely disappoints him in arresting the inflammation. In this connexion I would remark that the most reliable preparation I have used is the fluid extract (from the fresh root).—*Medical and Surgical Reporter*, November 8, 1879.

THE VALUE OF THE HYPOPHOSPHITES IN PHTHISIS.—Dr J. G. S. Coghill writes an article on this subject in the *Lancet*, 6th September, giving his experience in 100 cases of phthisis. His formula was:—

℞. Sodii hypophosphitis,
Calcii hypophosphitis, āā gr. viij.
Infusi. cascarillæ f. ℥j.

*Sig.*—For one dose twice daily, after meals.

He gives details, and concludes as follows:—A fair way to arrive at a true estimate of the hypophosphite treatment is to compare its general results with those of treatment of the whole body of the patients treated in the hospital during the same year. This is a comparison favouring the hypophosphites, as 25 per cent. of the total deaths occurred shortly after admission, the patients being in such a rapidly advancing state of disease as to preclude all attempts at systematic treatment; besides, in no case were the hypophosphites administered in which the prognosis was positively hopeless; also, when non-success was demonstrated, the treatment was changed. Of the total patients treated in the hospital during the year, viz. 428, 297 improved, 56 remained *in statu quo*, 51 got worse, and 24 died. Of those treated by hypophosphites, viz. 100, 57 improved, 17 remained *in statu quo*, 26 got worse, and 4 died. It seems evident from the statistics that the hypophosphites have no claim whatever to the character or properties of a specific remedy in the developed stages of pulmonary consumption. In only 25 per cent. of the cases could they be employed unaided, and these were cases that would probably have shown good results from favourable change of climate, improved dietetic and hygienic conditions, with general tonic treatment. Great disappointment resulted from its impotency in checking such characteristic symptoms of the disease as night-sweats, or influencing favourably the febrile conditions indicating advancing lung mischief. That, however, these salts, when judiciously employed, have valuable tonic properties, promoting the appetite, the digestion, and the assimilation more especially of fatty food, was strongly impressed on all who closely watched the effects of their administration. They have evidently strong pyrogenic or heat-producing properties, acting, indeed, on the system like phosphorus itself. This is especially the character of the hypophosphite of iron, which indeed renders it a very dangerous remedy in the arrested forms of the disease. The properties contra indicate their employment in advancing stages of phthisis, where there is high temperature and increased frequency of pulse. But when the disease is arrested, they come into favourable consideration as a means of stimulating the nervous system, and through it the subordinate processes of nutrition. The feeling of languor and lassitude so often complained of by the consumptive seems often greatly relieved, and unquestionably they have valuable weight-making properties. They have certainly no specific influences (so far as I have been able, after the most careful and unbiassed observation, to form an opinion) either in arresting when in progress, or markedly promoting repair when staged, the several forms of pulmonary phthisis, whether tubercular or pneumonic. To say that they have a specifically curative influence on the diathesis, and not on the lesion, is to relegate the hypophosphites to the category of a large number of general tonic remedies, of the good effects of which there is long, ample, and well-founded experience. On the other hand, it is greatly to be regretted that the hypophosphites of lime and soda more particularly should have claimed for them, in terms of extravagant laudation, the character of a specific in pulmonary consumption, which they do not seem to possess, and which much-to-be-deprecated proceeding has, no doubt, largely contributed to their being regarded with suspicion, and to their undoubted properties as general or nervine tonics, perhaps even as tissue-builders, being overlooked. As such they will certainly be found of great value in certain stages of treatment in appropriate cases. Indeed, this their legitimate use is very largely and increasingly recognised by the profession, and they are, with the lactophosphates of lime and iron, perhaps the best general tonics, both in cases of incipient consumption and in the more advanced stages of that disease, when the progress of the disease has been arrested.—*Medical and Surgical Reporter*, 1st November 1879.

## PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

ON EXOSTOSES WITHIN THE EXTERNAL AUDITORY MEATUS. — Professor Turner describes the occurrence of exostoses in two crania examined by him. The first was an adult male skull obtained at or near Pisaqua, Peru, and was an excellent specimen of the artificially deformed Peruvian skull, the frontal bones sloping backwards in an almost straight line from the glabella, and the occipital bone also having a very decided backward inclination. Both external auditory canals were nearly occluded by hard ivory-like exostoses. On the right side two of these exostoses were present. One, almost blocking up the orifice, arose from the anterior wall by a constricted peduncle; it was pea-like in form, and possessed a diameter of nearly three-tenths of an inch: the other, more elongated in shape, had a broad base of attachment to the anterior wall, and was more deeply seated than the pisiform exostosis. Two exostoses were also situated in the left meatus. One about the size of a pea arose by a broadish base of attachment from the anterior wall; the other, the size of a small shot, arose from the posterior wall towards its lower part. The two exostoses almost touched in the middle of the meatus, so that in the living person, when the integument was in place, the passage must have been quite blocked up. The exosteses both on the right and left sides grew from that part of the wall of the meatus which was formed by the auditory plate of the expanded tympanic ring. In the adult skull of a flat-headed Chenook Indian from the district of the Columbia river, Professor Turner found the right external auditory meatus partially occluded by a broad-based exostosis, which was elongated from without inwards, and grew from the posterior wall formed by the tympanic plate. On the left side a similarly shaped though smaller exostosis also sprang from the posterior wall; and much deeper in the meatus a linear-shaped exostosis could be seen, which from its position was evidently attached to the same wall near the posterior border of the membrana tympani. Both of these crania having been greatly altered in shape by artificial compression, the question naturally arose, if the growth of the exostosis had been induced by the pressure to which the bones of the head had been subjected in infancy. There was, however, nothing in the appearance of the skulls to bear out this supposition. Notwithstanding the deformity of the vault of the cranium, and a somewhat backward inclination of the squamous temporal, the zygoma and parts around the meatus preserved their natural form. Professor Seligmann, quoted by the author, found five cases of exostoses out of six artificially deformed crania examined, while the author found only the two cases above cited out of seventeen artificially deformed crania of North and South American Indians examined by him. In three of these crania, however, the auditory meatus, though without exostoses, was modified in shape, being flattened from before backward. This deviation from the normal contour of the canal, Professor Turner is, however, not inclined to ascribe to the artificial elongation of the crania; and in this respect, and also in regard to any influence which the compression of the skull in infancy may have upon the occurrence of exostoses, he agrees with the opinion expressed by the late Professor Jeffries Wyman. In several specimens of Peruvian skulls not artificially deformed, Professor Turner observed the narrowing of the auditory meatus; and especially in one case, a specimen from a tomb at Pachacama, the entrance into the right external meatus was narrowed to a vertical slit. There would thus appear to be, in the author's opinion, a tendency on the part of the aboriginal inhabitants of the American continent to possess modifications in the configuration of the external auditory passage. The paper of Professor Turner is an exceedingly interesting one, and with the large number of aboriginal American crania now in the possession of museums and in private collections, it is to be hoped that the subject will receive from other observers the attention which it merits. — William Turner, M.B., F.R.S., *The Journal of Anatomy and Physiology*, XII., Part 2, p. 200.

## OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin,
Edinburgh School of Medicine.

Is Psoriasis due to a Vegetable Parasite ?—Lang, after enumerating the many points of resemblance which psoriasis presents to the diseases of the skin due to vegetable parasites, announces his discovery of parasitic fungi in a particular stratum of the psoriasis papule. When, he says, we peel as far as possible the masses of scales from a patch of psoriasis, we reach finally a tender membrane immediately covering the vascular papillæ.

This can with care be removed tolerably continuously, and without much or any bleeding. This, Lang continues, is found to consist of epithelium of various sorts, of debris, and of fungi.

The fungous elements are either scattered singly, or oftener are heaped in groups, and consist of mycelium and spores. The spores are round, or more frequently oval, 0·006–0·008 mm. broad, and double that in length. Their protoplasm is so pale that only with the highest powers can it be seen to be granular; a nucleus was very rare. The mycelia were 0·002–0·004 mm. broad, and the hyphæ were 0·1 mm. in length—some were ten times this; their free end was rounded or pear-shaped; the small end of the pear bore sometimes a transverse marking. Lang thinks that the reason why these fungous elements have till now been overlooked is, that their forms are so delicate, and their protoplasm so devoid of colour. When, however, one has once learned to recognise them, he will scarcely meet with a preparation in which they are not present. He names the fungus epidermidophyton. (It should be remembered that fungous elements are more or less constantly present in all effete epidermic structures.)—*Vierteljahresschrift für Dermatologie und Syphilis*, 2 and 3 Hept, 1879.

TREATMENT OF SEBORRHŒA.—Dr Shoemaker recommends, besides the usual tonic treatment, local and constitutional, in both forms of seborrhœa, the use of a mild stimulating soap, which he calls sapo matricariæ sulphurisque. Each cake is composed of one and a half ounces each of oil of theobroma and olive oil, two drachms of powdered German chamomile flowers, one drachm of precipitated sulphur, and one ounce of a weak solution of caustic soda. He has used this medicated soap, in dispensary and private practice, in seborrhœa and various scaly eruptions, with good results. In seborrhœa it will cause the enlarged glands to contract, the skin to become healthy, and the disease to disappear. After using the soap in seborrhœa of the scalp, the following may be employed as a pomade: beef marrow two ounces, white wax half an ounce, tincture of quinine one drachm, balsam of Peru three drachms, oil of rose three drops, oil of verbena three drops, essence of ambergris half a drachm.—*Philadelphia Medical Times*, 21st June 1879.

HÆMORRHAGIC ERUPTION CAUSED BY SALICYLIC ACID.—Freudenberg reports the occurrence upon the skin of numerous large petechiae and vibices after the use of salicylic acid for six days, which continued to appear for a day after the omission of the drug. The eruption became paler, and terminated after a week in excessive desquamation of the affected parts. After the disappearance of the cutaneous symptoms the acid again was given, but it was again followed by the same hæmorrhagic manifestations and by desquamation as after scarlet fever.—*Allg. Med. Cent-Zeitung*, 26th October 1878, and *Boston Med. Sur. Jour.*, 12th June 1879.

TINEA IMBRICATA.—This new parasitic skin disease, described by Dr Manson of Amoy, China (Med. Rep. Imp. Maritime

Customs for China, 1879), as separate from tinea circinata, has a peculiar geographical distribution, being limited almost exclusively to the Straits of Malacca or the islands of the Malay Archipelago. Starting from the point of inoculation, the epidermis becomes undermined, and at length detached in long flakes about one-eighth of an inch in breadth, the free edge of the flakes being directed towards the centre or point of inoculation, the convexity remaining firmly attached. The circles formed are concentric. As soon as the primary ring has attained a diameter of about half an inch, a brown patch is again seen to be forming at its centre. This in its turn also cracks the young epidermis over it, and a second ring is formed inside the first, which it follows in its extension. The process may go on till nearly the whole surface of the body is covered. The fungous elements are in enormous abundance. The conidia of the fungus of tinea imbricata are more oval than those of tinea circinata, while the mycelium threads are characterized by the absence of numerous swellings and constrictions, and other irregularities of outline which exist in the latter. When inoculated, its fungus always produces tinea imbricata, that of tinea circinata, tinea circinata. The disease is identical with Tokelau ringworm, described and figured by the late Dr Tilbury Fox and Dr Farquhar.—*Condensed from Med. Times and Gazette*, 20th September 1879.

EXPERIMENTAL AND ANATOMICAL INVESTIGATIONS ON ERYSIPELAS. By Dr H. Tillmanns of Leipzic.—The author endeavoured by these to unravel some yet disputed questions.

1. Is it possible to transfer erysipelas from diseased to healthy persons, *i.e.*, do fluids (lymph, blood, contents of vesications, pus) taken from the erysipelatous area possess specific contagious peculiarities—as, for example, vaccine lymph ?

Of twenty-five attempts to convey erysipelas by direct inoculation to healthy animals, a positive result was attained in five. Rabbits inoculated with one of the above-named fluids taken from men affected with erysipelas within the diseased area, were affected by a disease in no way to be distinguished from erysipelas of human beings. Such cases only were assumed as satisfactory in which, besides typical, migratory, diffuse redness and swelling, general feverishness was also plainly recognisable. In one instance, after inoculation with the contents of a bulla of erysipelas, which in other experiments induced a well-marked form, an abscess, accompanied by increased temperature and diarrhœa, appeared at a distance from the point of inoculation, burst spontaneously, and soon healed. This seemed to Tillmanns analogous to the cases where, after slight abrasions on the fingers, erysipelas shows itself first on the elbow or upper arm, or where an apparent primary erysipelas of the face arises when there has been a previous superficial lesion of continuity in a neighbouring mucous cavity. As regards the term of incubation and the form of commencement in four of the five cases, redness and fever were simultaneously established twenty-four hours after inoculation; in the fifth the local symptoms came on first, forty-five hours after puncture, the fever twenty-four hours later. In all the successful cases the inoculated fluid contained bacteria. From this it appears that erysipelas is a transmittible and moderately contagious disease, and that the poison remains confined to the erysipelatous area.

2. What is the effect of carbolic acid on such fluids, from tissues affected with erysipelas, as by transference to sound individuals occasion it, and which then, with the greatest probability, contain its poison?

The addition of a 2-4 per. cent. carbolic acid solution renders a previously active erysipelatous inoculating fluid quite inefficacious.

3. Occurrence and significance of bacteria in erysipelas.

The occurrence of bacteria in fluids from the tissues and in the tissues is no more a constant feature in erysipelas than in septicæmia. It is thus possible that not every case of erysipelas is brought about by the migration of bacteria as such, and the advance of all cases of erysipelas is not connected with the presence of micro-organisms.—*Condensed from Schmidt's Jahrbücher,* No. 6, 1879.

## PERISCOPE OF OPHTHALMOLOGY.

By GEORGE A. BERRY, M.B.

ON THE COMBINATION OF IRIDOTOMY WITH EXCISION OF A PORTION OF THE IRIS, IRIDO-ECTOMY AND IRIDO-DIALYSIS (*Annales d'Oculistique*, vol. lxxxii. p. 137).—In this paper, which was read at the Ophthalmological Congress at Naples, Von Wecker gives an account of the different methods of operating which he has found useful in cases of occlusion of the pupil, &c., after cataract extraction, or any traumatism which has been followed by the loss of the lens. If the occlusion be incomplete, or complete but not accompanied by displacement of the agglutinated borders of the pupil or any great bulging of the iris, he makes with his iridotomy scissors a transverse section across the central part, after having made room for the introduction of the scissors near the corneo-sclerotic margin. When along with complete occlusion there is a drawing-up of the iris towards the cicatrix in the cornea, and more or less marked bulging, he recommends that the keratome should be entered in the neighbourhood of the corneal cicatrix and pushed down through the iris. From one extremity of the transverse wound a cut with the scissors may first be made at a somewhat obtuse angle through the iris; and if this be not followed by retraction owing to loss of elasticity, a triangular portion of iris may be cut out and removed by cutting in a converging direction with the scissors from either end of the transverse incision. When in addition to the last condition we must admit the existence of thick resisting masses of exudation behind the iris, the author recommends that the primary incision should be removed from the corneal cicatrix, that is from the centre of the inflammation. He then performs irido-ectomy by entering a Grafe's knife through cornea and iris opposite to the situation of the cataract incision, and removes a triangular portion of iris with the scissors. In the most severe cases of all, where the bulging of the iris has been so excessive as to give rise to a greater or less adhesion to Descemet's membrane, the marginal incision has to be abandoned, and the keratome entered towards the centre of the cornea, where the anterior chamber still exists, and plunged to a third of its length through the iris; from either extremity of the incision in the iris two divergent cuts are made, reaching very accurately to its peripheral attachment. The portion thus marked out is removed by forceps. This last operation, which Wecker calls irido-dialysis, does not, he says, entail any great traction in the ciliary body.

SNOW-BLINDNESS—From a studyof the literature of the subject and personal observation, Professor Schiess-Gemuseus of Bâsle comes to the conclusion that snow-blindness is always a combination of blepharospasmus and conjunctivitis. The conjunctivitis he supposes arises from the irritation of the exceedingly dry air of great altitudes, whilst the blepharospasmus is induced by the prolonged continuous contraction of the eyelids to avoid the glare of the strongly illuminated snow. Both these conditions, strong illumination and dryness of atmosphere, are not so excessive in the lowlands in winter, and therefore, although large tracts are covered with snow, blindness does not occur.—*Archiv f. Ophth.*, vol. xxv. part 3, p. 173.

PATHOLOGY OF INCREASED INTRA-OCULAR TENSION (*Ophth. Hos. Rep.*, vol. ix. part 3, p. 379).—Dr Brailey, curator of the museum at Moorfields, has made a careful examination of 149 eyes enucleated at that hospital, in a large number of which there was increased tension. He finds that in glaucoma there is almost without exception enlargement of the calibre and thinning of the walls of the arteries supplying the ciliary region. He draws special attention to the fact that this enlargement is sometimes found only at one part of the *circulus major*. Measurements of the long ciliary arteries showed that their calibre was not increased in cases with glaucomatous tension. The enlargement of the arteries appears to be primary, preceding the atrophy of the ciliary muscle. It cannot be due to an obstruction to the passage of the blood through the choroidal veins, as it is so often limited to one region. The thinning of the arterial walls is remarkable, and appears to increase with the persistence of the abnormal tension. It is something special to glaucoma. The efferent veins present no enlargement corresponding to that of the arteries. A remarkable thinning of the sclerotic, seen as a wide bluish-black streak, is found in the course of the ciliary arteries and nerves. This is in some cases so extreme as to permit of staphylomatous bulging. The average thickness of the ciliary muscle is less than normal in cases where the tension has been great. The atrophic condition is not due to pressure, because it was found in two cases to be confined to one part of the muscle. The portion of the muscle in which the earliest signs of atrophic change can be detected coincides with that in which an enlarged artery is most commonly found, viz., the antero-internal part. The most reasonable supposition seems to be that both the vascular and muscular changes are due to a common nervous influence. It is very common to find the periphery of the iris applied to the adjacent corneal margin, but this condition is found even with Tn and —T, although not so frequently. The adhesions are therefore probably secondary to the +T; similarly with the obliteration of Schlemen's canal. The cases are arranged into seven groups. In 1-5 there was +T, in group 6 no change in intra-ocular tension accompanied the diseased conditions, and in group 7 the tension was diminished.

Origin of the Oculo-motor and Abducens Nerves.—Duval (*Progrès Med.*, No. 28, 1879) finds that the centres of the abducentes are connected by commissural fibres with the centres of the third nerves, the fibres crossing so that the abducens nucleus of the one side is in anatomical connexion with the oculomotorius nucleus of the other. Besides, there is also a bundle of connecting fibres between the abducens centre and the centre of the trochlearis of the opposite side. The two trochlear centres are also connected by fibres passing through the valvula Vieussenii. The preparations were obtained from monkeys.

Congenital Displacement of both Lenses (*Ophth. Hosp. Rep.*, vol. ix. p. 435).—Mr Stanford Morton records a remarkable instance of hereditary transmission of the above condition occurring certainly in three successive generations comprising seven individuals, and presumably in five, comprising ten individuals. The most general direction of the displacement was inwards, either directly or with an inclination upwards. A subjoined table shows that the defect was transmitted to the eldest member of each family, whether male or female. Several of the other males were also affected. Of the ten cases, eight were males and two females.

On the Mode of Termination of Descemet's Membrane.—The interest which at present attaches to the anatomy of the canal of Fontana in connexion with the etiology of glaucoma, induced Königstem (*Archiv f. Ophth.*, vol. xxv. part 3, p. 289) to examine the mode of termination of Descemet's membrane. This he did in a number of different animals, and found that although the relations could be most distinctly made out in the eye of the ox, yet they were similar in all, including man. The membrane does not end with a sharp border, or become broken up into fibres peripherally, but surrounds the processes from the iris, like the fingers of a glove. These processes are therefore not inserted behind the border of Descemet's membrane, but penetrate it, and then branch on the other side of it. The wart-like appearances described by Henle were probably the points of penetration of these fibres of the ligamentum pectinatum.

AN OPHTHALMOSCOPTOMETER.—Warlomont and Loiseau have constructed an instrument with which the state of refraction may be ascertained by the indirect method of ophthalmoscopic examination. The advantage claimed for their method is that the results come out independent of the observer's refraction. This they consider of great importance. The description of this instrument was given at the International Congress at Amsterdam, and is now published in the *Annales d'Oculistique,* vol. lxxxii. p. 129.

The point to be determined is the position of the image of the fundus with regard to the convex lens. The light is therefore thrown into the eye by reflexion from a concave transparent mirror. Behind this, at a distance which allows the mirror to be sufficiently inclined towards the source of light, is the convex lens, and between the eye of the observer and the lens a movable screen, on which the image is caught as in a camera obscura. If the image fall exactly at the focus of the lens, the eye examined is emmetropic; if between the lens and its principal focus, myopic; and if between the observer and the focus, hypermetropic. The amount of ametropia in each case may be obtained in dioptres by dividing the distance of the image from the principal focus by the square of its focal length (in decimals of a mètre). If a lens of 14 dioptres be employed, each half centimetre on either side corresponds to a dioptre of ametropia, and a scale may be graduated accordingly. Thus, if the image lie at 4 cent. from the focus: 14D=focal length of 0·071 mm., the square of which=0·005 mm.=$\frac{1}{2}$ cent. Then $\frac{4\cdot0}{5\cdot0}$=8D of ametropia. As the lens is focussed for the surface of the cornea, 13 mm. must be added or deducted from the result thus obtained, according as the eye examined be hypermetropic or myopic.

# Part Fifth.

## MEDICAL NEWS.

BERLIN INTERNATIONAL FISHERY EXHIBITION, 1880.—The King of Saxony has just placed at the disposal of the Exhibition Commission an extra special prize, open to all nations, to consist of silver plate, for the best practical scheme for rendering harmless to fish in rivers and lakes the refuse from factories and sewage from towns falling into the same. Although the prize thus offered is intended for a complete solution of the question, partial solutions are not to be excluded from consideration by the jurors, who will also be instructed to decide as to the plan deemed second in order of merit. Such plan is to receive a prize of 600 marks from the

Minister of Agriculture, if possessing advantages over the systems now in use. Proposals from British subjects (which may be in print or manuscript, and accompanied or not by drawings) must be delivered prior to March 1st, 1880, to Mr Edmund Johnson, *Commissaire Délégué,* at the London offices of the Exhibition, 1 Castle Street, Holborn. Apparatus and models intended to illustrate any of the plans so submitted will have to be forwarded subsequently to the Exhibition (which will be opened on April 20th), it being requisite, however, to apply before January 1st for the necessary space for the same in the British section.

LIST of CANDIDATES who were successful for Appointments as Surgeons in Her Majesty's British Medical Service at the Competitive Examination held in London on 8th December 1879.

| No. | Names. | Marks. | No. | Names. | Marks. |
|---|---|---|---|---|---|
| 1. | Barker, F. R. | 2590 | 34. | Donaldson, R. D. | 1750 |
| 2 | Keogh, A. H. | 2525 | 35. | White, H. L. E. | 1745 |
| 3. | Hill, C. B. | 2420 | 36. | Johnston, C. M. | 1740 |
| 4. | Clark, J. R. A. | 2330 | 37. | Hall, J. L. | 1705 |
| 5. | Flannagan, H. E. B. | 2295 | 38. | Burlton, A. H. | 1700 |
| 6. | Michael, H. J. | 2230 | 39. | North, E. | 1695 |
| 7. | Dorman, T. | 2215 | 40. | Poynder, G. F. | 1695 |
| 8. | Inman, A. W. G. | 2185 | 41. | Sherman Bigg, J. K. | 1675 |
| 9. | Corker, T. M. | 2180 | 42. | Smythe, G. F. A. | 1665 |
| 10. | Myles, E. H. | 2145 | 43. | Battersby, H. L. | 1655 |
| 11. | Robinson, G. S. | 2125 | 44. | Hewitt, A. | 1645 |
| 12. | Moffitt, F. B. | 2115 | 45. | Landon, E. | 1640 |
| 13. | Webb, C. A. | 2075 | 46. | Mulvaney, P. | 1635 |
| 14. | Lewis, J. G. S. | 2065 | 47. | Nicholson, J. E. | 1635 |
| 15. | Martin, H. | 2050 | 48. | Beale, T. W. | 1625 |
| 16. | Croly, A. E. S. | 2010 | 49. | Hood, F. E. C. | 1625 |
| 17. | Cusack, R. O. | 2010 | 50. | Wolsley, W. O. | 1610 |
| 18. | Smith, E. F. | 2010 | 51. | M'Neece, T. F. | 1605 |
| 19. | Cowen, W. A. | 2000 | 52. | Smith, R. V. | 1590 |
| 20. | Forman, R. H | 1995 | 53. | M'Creery, B. T. | 1580 |
| 21. | Flood, S. J. | 1965 | 54. | O'Connor, A. P. | 1575 |
| 22. | Williams, D. S. | 1955 | 55. | Bolster, A. M'M. | 1570 |
| 23. | Robinson, G. W. | 1940 | 56. | Wardrop, D. | 1545 |
| 24. | Cameron, N. | 1920 | 57. | Goggin, G. T. | 1520 |
| 25. | Watson, J. | 1910 | 58. | Christian, H. G. | 1485 |
| 26. | Todd, O. | 1905 | 59. | Jones, J. M. | 1470 |
| 27. | Geoghagan, A. O. | 1876 | 60. | Baker, F. M. | 1465 |
| 28. | Egan, C. R. | 1810 | 61. | Williamson, C. | 1460 |
| 29. | Day, J. D. | 1805 | 62. | Oliver, R. | 1415 |
| 30. | Henderson, W. R. | 1805 | 63. | Asbury, A. | 1400 |
| 31. | Cumming, R. T. | 1800 | 64. | Carleton, P. M. | 1375 |
| 32. | Kavanagh, A. M. | 1795 | 65. | Maclean, F. R. | 1365 |
| 33. | Harwood, J. H. | 1765 | | | |

The following gentlemen, having obtained the qualifying number of marks, have also been accepted.

66. Cox, H. L.
67. Camody, J. P.
68. Barnes, R. W.
69. Walsh, T. P.
70. O'Callaghan, G. H. K. M'C.
71. Fox, P. H.
72. Wall, H. A.

UNIVERSITY OF EDINBURGH.—The number of students who have already joined the medical classes for the current session is 1138—viz., 1st year, 337; 2d year, 277; 3d year, 257; 4th year, 267; being 96 more than on the corresponding day of the session last year.

ROYAL COLLEGE OF SURGEONS, EDINBURGH, 1*st December* 1879.—At a meeting of the Extra-Academical Teachers, held here this day, Dr Keiller reported that he had received a communication from Dr Greenfield, Honorary Secretary to the Murchison Memorial, intimating that "at a meeting of the General Committee of this Memorial on Friday, 14th November, the following resolution, moved by Dr Richard Quain and seconded by Dr Spencer Cobbold, was unanimously adopted, That the General Committee having heard the protest of the Edinburgh Extra-Academical Teachers, resolve to recommend that the competition in Edinburgh for the Murchison Memorial Scholarship be open to all students of the Edinburgh Medical Schools." After remarks had been made by various speakers on the satisfactory nature of the communication, the following resolution was proposed by Dr Muirhead, seconded by Dr Handyside, and unanimously agreed to—"That Dr Keiller be asked to convey to the General Committee of the Murchison Memorial the thanks of the Lecturers in the Extra-Academical School of Medicine, for their frank and ready acknowledgment of the justice of the protest forwarded to them against the invidious exclusion of the students in this School from the competition for the Murchison Memorial Scholarship; and also for the prompt and unanimous acquiescence of the General Committee in the request of the Lecturers to open the competition to *all* students in the Edinburgh Medical School, as had already been resolved upon in the case of the London Medical Schools. 2d. That a copy of this resolution be forwarded to the leading medical journals for publication."

ALEX. KEILLER, *Chairman of Lecturers.*

## PUBLICATIONS RECEIVED.

JAMES W. ALLAN, M.B.,—Notes on Fever Nursing. J. & A. Churchill, London, 1879.

W. FAIRLIE CLARKE, M.D.,—Manual of the Practice of Surgery. Henry Renshaw, London, 1879.

J. MATTHEWS DUNCAN, M.D.,—Clinical Lectures on the Diseases of Women. J. & A. Churchill, London, 1879.

E. KLEIN, M.D., and E. NOBLE SMITH, L.R.C.P.,—Atlas of Histology. Part 9. Smith, Elder, & Co., London, 1879.

MALCOLM MORRIS,—Skin Diseases. Smith, Elder, & Co., London, 1879.

Le Docteur A. MOSSÉ, —Étude sur L'Ictère Grave. J. B. Baillière et Fils, Paris, 1879.

FRED. T. ROBERTS, M.D.,—Handbook of the Theory and Practice of Medicine. 2 Vols. H. K. Lewis, London, 1880.

WILLIAM STEWART, M.D.,—The Treatment of Hepatic Disease. Smith, Elder, & Co., London, 1879.

HERBERT TIBBITS, M.D.,—How to Use a Galvanic Battery. J. & A. Churchill, London, 1879.

ANDREW WOOD, M.D., LL.D., F.R.S.E.,—Schiller's Lay of the Bell, and other Ballads. W. P. Nimmo & Co., Edinburgh, 1879.

# Part First.

## ORIGINAL COMMUNICATIONS.

ARTICLE I.—*Method of Case-taking in Gynecology.* By ALEXANDER RUSSELL SIMPSON, M.D., F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University of Edinburgh.

(*Communicated to the Edinburgh Obstetrical Society*, 26*th November* 1879.)

SEVERAL years ago Professor Grainger Stewart prepared a printed scheme for the guidance of his clinical clerks in "taking" their cases, and his example has been generally followed among the physicians and surgeons in the Royal Infirmary of Edinburgh.

Dr Emmet of New York has given in his recent work[1] an interesting form for recording cases of disease in the pelvic organs of the female; and I have met with other schedules for guiding the record of such cases. Not being satisfied, however, with any of them, I have lately drawn up a method of case-taking for the immediate purpose of guiding the clinical clerks in keeping records of gynecological cases in the Buchanan Ward. It occurred to me that it might interest the Fellows of this Society to have the opportunity of discussing it; and in submitting it now to their notice, I shall be glad of any suggestions for its improvement.

It is printed in the form of a double card with two columns.

On the left-hand page or column are noted the points regarding which information is to be gained from the anamnesis or recollection of the patient. An experienced practitioner in this as in other departments of medicine has learned how to draw from the patient a few facts of her history that guide him to the seat of mischief, and may even give him a fair impression as to its probable nature; but the student who is learning to investigate, requires to have some such chart as this to guide him in his inquiries; and it may even prove helpful sometimes to the skilled practitioner who wishes fully to investigate and keep a record of his cases.

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[1] *Principles and Practice of Gynecology*, p. 58. London, 1879.

*DISEASE.*

ANAMNESIS.

1. Name; Age; Occupation; Residence; Married, Single, or Widow; Date of Admission.
2. Complaint and Duration of Illness.
3. General History of—(*a*) Present Attack; (*b*) Previous Health; (*c*) Diathesis; (*d*) Social Condition and Habits; (*e*) Family Health.
4. Sexual History.
    - (1) *Menstruation*—
        - *A.* Normal—(*a*) Date of Commencement; (*b*) Type; (*c*) Duration; (*d*) Quantity; (*e*) Date of Disappearance.
        - *B.* Morbid—(*a*) Amenorrhœa; (*b*) Menorrhagia; (*c*) Dysmenorrhœa.
    - (2) *Intermenstrual Discharge*—(*a*) Character; (*b*) Quantity.
    - (3) *Pareunia.*
    - (4) *Pregnancies*—(*a*) Number; (*b*) Dates of First and Last; (*c*) Abortions; (*d*) Character of Labours; (*e*) Puerperia; (*f*) Lactations.
5. Local Functional Disturbances of—(*a*) Bladder; (*b*) Rectum; (*c*) Pelvic Nerves and Muscles.
6. General Functional Derangements of—(*a*) Nervous System; (*b*) Respiratory System; (*c*) Circulatory System; (*d*) Digestive System; (*e*) Emunctories.

PHYSICAL EXAMINATION.

1. General Appearance and Configuration.
2. Mammae.
3. Abdomen—(*a*) Inspection; (*b*) Palpation; (*c*) Percussion; (*d*) Auscultation; (*e*) Mensuration.
4. External Pudenda.
5. Per Vaginam—(*a*) Orifice; (*b*) Walls and Cavity; (*c*) Roof; (*d*) Os and Cervix Uteri.
6. Combined Examination—(Abdomino-Vaginal, Recto-Vaginal, Abdomino-Rectal, Abdomino-Recto-Vaginal, Abdomino-Vesico-Vaginal)—
    - (1) *Uterus*—(*a*) Size; (*b*) Shape; (*c*) Consistence; (*d*) Sensitiveness; (*e*) Position; (*f*) Mobility; (*g*) Relations.
    - (2) *Fallopian Tubes.*
    - (3) *Ovaries*—(*a*) Size; (*b*) Situation; (*c*) Sensitiveness.
    - (4) *Peritoneum and Cellular Tissue.*
    - (5) *Bladder.* (6) *Rectum.* (7) *Pelvic Bones.*
7. Use of—(*a*) Speculum; (*b*) Volsella; (*c*) Sound; (*d*) Curette; (*e*) Aspiratory Needle; (*f*) Tent or Dilator.
8. Physical Changes in—(*a*) Nervous, (*b*) Respiratory, (*c*) Circulatory, (*d*) Digestive, (*e*) Emunctory Organs.

DIAGNOSIS.

PROGNOSIS.

TREATMENT.

PROGRESS AND TERMINATION.

Every case will not, of course, demand inquiry regarding every point registered in the several paragraphs. But, on the other hand, any case that comes before us may demand inquiry as to any of these points. And it is well in the history of each case to get information as to some of the sections of Sexual History in paragraph 4. It is important, for example, to get all the information possible concerning menstruation. It is only by getting the reliable history of the date of its commencement in a large series of cases that we arrive at a determination as to the normal date of puberty. Hence, under the heading of Normal Menstruation, suggestions are made for inquiry into this and the other important characters of the natural function. Under the heading of Morbid Menstruation attention is turned to the three directions in which it is liable to be modified: amenorrhœa suggesting all the varieties of diminution up to complete absence of the flow; menorrhagia, the varieties of increased discharge; and dysmenorrhœa, the cases where the period is attended with pain before, during, or after the flow.

The second section of the Sexual History has regard to the discharges of various kinds that may occur during the intermenstrual periods. These have sometimes been ranged under the general category of leucorrhœa, but they vary from the clear albuminous discharge of a uterine catarrh, through the mucous, purulent, creamy, and flocculent discharges of chronic vaginal and cervical inflammations, to the watery, sanious, fœtid, fæcal, and urinary discharges attendant on more grave disorders. These are such frequent accompaniments of uterine disease that inquiry as to their character and quantity in most cases becomes imperative.

The third paragraph, on the other hand, will more rarely require to be referred to. It is only in some cases of disease among married women that we meet with "the condition of difficult or painful performance of the sexual function," for which Barnes has supplied us with the very convenient designation Dyspareunia. I have given a place to inquiry regarding Pareunia, because, though the range of cases to which it applies is limited, I agree with the opinion of Dr Barnes,[1] that "dyspareunia in the female is perhaps the most absolute of all the indications of local malformation or disease. It calls the most imperatively for local examination as to its cause. In its milder forms it may make the sufferer's life a course of physical and mental wretchedness; in its severe forms it virtually unsexes her; and in any form it may lead to the most disastrous social calamities." Kehrer, in his recent very interesting contribution *zur Sterilitätslehre*,[2] gives a proportion of 4·1 per cent. of cases of sterility in the female due to vaginismus, which, as he points out, is but one of the forms of dyspareunia.

The necessity for inquiry into the history of the patient's Pregnancies impresses us when we consider how frequently the results of them, whether terminated prematurely or at the full time, give the first impulse to both acute and chronic maladies. And the investigation can never be complete without inquiry into the functional disturbances of the other pelvic organs, and usually into the more general derangements of distant organs and systems of the body.

The right-hand page or column gives suggestions for conducting the Physical Examination of the patient. It indicates both the subjects that chiefly require investigation, and the means to be employed in bringing the senses of sight, hearing, and, above all, touch, to bear upon the organs to be explored. Here also there may seem to be some points suggested for examination that are of minor importance, and methods of exploration indicated that it will rarely be necessary to have recourse to. Still every experienced gynecologist will recognise that points which in general are of trivial import, may in certain cases demand very special attention: and even the methods of exploration which are rarely had recourse to, must be registered to remind us of their importance in certain morbid conditions of the pelvic organs.

It may be necessary to note the general appearance and configuration of the patient, the condition of the mammæ, and changes in the external pudenda. More important in general is the investigation of the abdomen and the vagina; and the modes of their examination, or the points about them requiring attention, are more fully indicated. The largest space, however, is devoted to the combined examinations by palpation through the abdominal walls, and exploration through the pelvic outlets. This combined examination, especially the abdominal-vaginal, gives by far the most complete and satisfactory results of all the methods of exploring the conditions of the pelvic organs; and after one has acquired experience in the employment of it, he begins to feel that he can often dispense with all others. To educate himself, however, every practitioner must learn the use of the various aids to sight and touch which are indicated in the seventh paragraph; and to the last the wise practitioner will often do well to correct or confirm the impression he has gained from the combined examination by making use of one or other of the instruments which are so helpful in gynecological investigations, and the introduction and improvement of which have constituted the most important advances in this department of medicine.

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[1] *Clinical History of the Medical and Surgical Diseases of Women*, p. 65. London, 1878.

[2] *Beiträge zur Klinischen und experimentellen Geburtskunde und Gynækologie*, ii. 127. Giessen, 1879.

An eighth paragraph reminds us that we must not as specialists limit our view to the condition of the sexual apparatus, but be prepared to recognise and record physical changes in other systems and organs of the body.

Schultze, Spencer Wells, Beigel, and others, have given outline sketches of the abdomen and pelvic cavity and organs, with the purpose of presenting more graphically any changes that occur in the relations of these organs to each other, or to tumours or effusions that may be found among them. The progressive growth of tumours, or the progressive diminution of effusions, or changes in position of the pelvic viscera, can thus be more distinctly registered. I am furnishing the clinical clerks with the three accompanying diagrams.

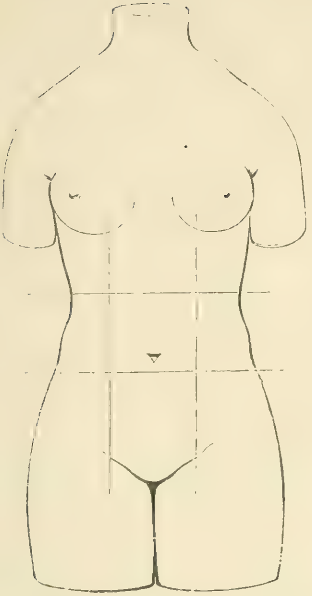
## ARTICLE II.—*On the Treatment of Abortion.* By ANGUS MACDONALD, M.D., Lecturer on Midwifery and Diseases of Women, Medical School, Edinburgh, etc.

(*Read before the Edinburgh Obstetrical Society*, 10*th December* 1879.)

THE treatment of an accident occurring so frequently as abortion which happens in at least ten per cent. of all pregnancies, cannot fail to interest every practical obstetrician. As, moreover, the comfort or misery, the health and even life, of women so frequently depend upon the skill with which an abortion is managed, it is of the utmost importance that clear views of this subject should be entertained by the profession.

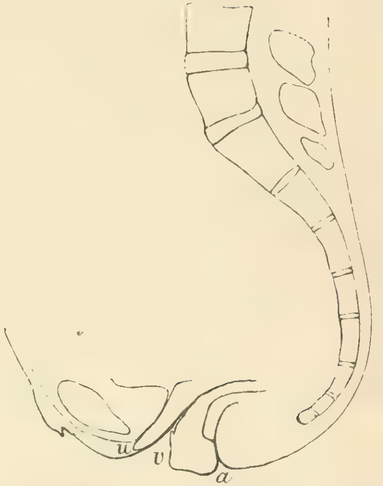
Considerable experience as an examiner of candidates for medical licenses, as an hospital physician, and as a gynecological

## OUTLINE DIAGRAMS

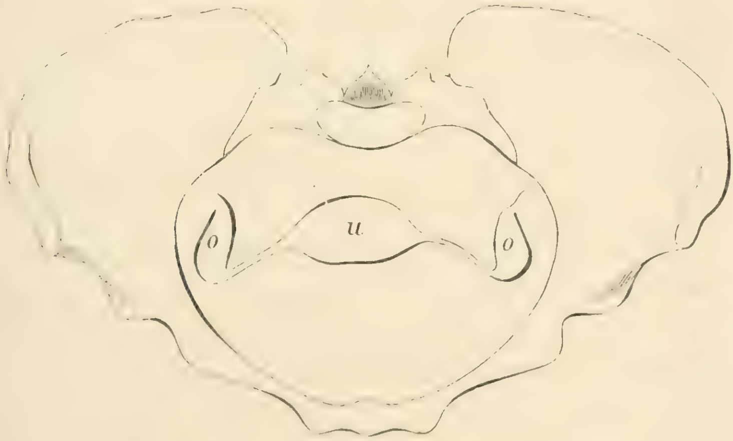


Front view of Abdominal Surface, showing Regions:—

| | | |
|---|---|---|
| Right Hypochondriac. | Epigastric. | Left Hypochondriac. |
| Right Lumbar. | Umbilical. | Left Lumbar. |
| Right Iliac. | Hypogastric. | Left Iliac. |



Outline vertical section of Female Pelvis. *u* indicating the orifice of the urethra; *v*, vagina; *a*, anus.



Outline view of Pelvic Brim, seen from above, showing position of *u*, Uterus and *o* Ovaries, when the bladder is well filled.

consultant, has very strongly impressed me with the conviction that the treatment of abortion is not uncommonly very imperfectly apprehended by the student, and only loosely grasped even by many practitioners. It has therefore occurred to me that it would be of some advantage to provoke a discussion and criticism of the subject in our Society, with the view of eliciting what is the most approved practice among us. I am the more emboldened to do so because, although both in Germany and in America several recent papers of great merit have been published upon this subject, in our own country little attention has been directed to the question for some time back. And, moreover, I hardly think the treatment of abortion is one of those subjects on which the rules of procedure are so uniform and clear among us that we can with advantage allow the matter to go to sleep. I have accordingly put together, as concisely as possible, what I consider to be the most appropriate treatment of this accident, and now lay my observations before the Society, in the hope that in the course of discussion some fresh light may be shed upon this most important obstetrical subject.

In considering the subject, I mean to restrict my observations to early miscarriages—that is, to interruptions to pregnancy about the end of the third month. But these embrace the greater proportion of abortions or miscarriages, and, besides, are much more difficult to treat than those occurring later on, after the uterus has acquired considerable size and contractile power.

There is no denying that abortions are liable to involve the subject of them in very serious trouble and danger. They are dangerous at the time of their occurrence by the direct loss of blood they occasion. They are further apt to lead to septicæmia through the decomposition of retained clots or of retained portions of the ovum. Even although both these accidents should be fortunately avoided, the patient is further rendered liable to the formation of placental polypi, or to granular conditions of the mucous membrane of the body of the uterus, with consequent menorrhagia. Not unfrequently, also, is subinvolution the result of an ill-cared-for miscarriage. In addition to the above sufficiently serious list of risks, there is further to be recorded the great tendency of ovaritis, of perimetritis, and of parametritis to follow abortion.

These being possible evil consequences,—and I have not mentioned all that may supervene,—it is our duty to inquire if, in our treatment of such cases, it is in our power to lessen or remove any of the risks that are apt to attend this accident.

The treatment of abortion divides itself into,—

1. The treatment of threatened abortion.
2. The treatment of abortion after it is clearly impossible to prevent interruption to the pregnancy.
3. The after management during the lying-in week.
4. The treatment of placental polypi and other causes of hæmorrhage traceable to abortion.

Let me take these up in a little detail.

## I.—*The Treatment of Threatened Abortion.*

In the management of this condition there is no difference of opinion. After the practitioner, on due inquiry respecting the symptoms, especially the character of the pains, the amount of hæmorrhage, and the condition of the cervix, is satisfied that the expectation to arrest the threatened accident is not hopeless, it is his duty, by rest, recumbency, cool regimen, and opiates, to endeavour to maintain quiet of the circulation, and arrest of the uterine contractions and of the hæmorrhage. It has lately been urged in such cases to administer ergot as a uterine hæmostatic; but considering the powerful influence of that medicine as a stimulator of uterine contraction, it appears to me unreasonable to expect that the drug will not do more harm by inducing contraction of the uterus than any good effect it might have in inducing contraction in the walls of the uterine arteries, and thereby lessening the tendency to bleeding. I consequently have never felt myself warranted in prescribing it with this view. In all such cases search should be made for hydatids, as myxoma of the chorion is a frequent cause of abortion, and in such cases we ought clearly not to attempt retention of the ovum.

II.—But supposing that the bleeding and other symptoms abundantly satisfy the attendant that to attempt to conserve the pregnancy is a hopeless task, how is the case to be conducted? But here let me state, in passing, that in miscarriages, as in other conditions, the mere amount of hæmorrhage must not be too much trusted to. Very many cases of threatened abortion proceed to full time after what appears a loss of blood inconsistent with continued gestation. It is agreed on all hands that the loss of blood may be very considerable without abortion, so long as the source of it is near the lower pole of the ovum, where it obtains free exit. But, again, a trifling amount of bleeding may lead to disaster if it occurs high up in the uterus, and thus separates any considerable portion of the membranes from their attachment. It is always assumed, of course, that in such cases the fœtus is alive and healthy, and its circulation is not interfered with by the drain of blood.

I have myself lately met with a case in which the bleeding was so severe as to lead the attendant to introduce a sponge-tent into the cervix for its arrest. The cavity of the cervix was therefore freely dilated throughout its whole extent, and yet the utero-gestation was not interrupted, but on the arrest of the bleeding continued normally.

This curious case possesses another point of special interest. The patient suffered from most severe morning sickness. But after the dilatation of the cervix the sickness was not the least improved, continuing quite as severe as formerly till midtime of pregnancy, when it declined. Such a case appears to me to present a crucial experiment regarding the value of Copeman's proposed dilatation of the cervix for morning sickness of pregnancy, for if dilatation of the cervix could cure morning sickness, it ought to have done so here. But no improvement followed the dilatation.

In all cases, however, in which the regularity and intensity of the uterine contractions are so established as, along with the attendant hæmorrhage and pronounced change in the cervix uteri, to remove all hope of avoiding abortion, what are we to do?

It is in this condition of matters that there exists the greatest difference in practice. Let us therefore endeavour to formulate a plan of procedure. First of all, I would say that if the bleeding is moderate and the contractions tolerably powerful, it is a mistake to consider that any specially active treatment is required, as the great majority of cases need nothing further than the free administration of ergot, the maintenance of rest, quiet, and recumbency, with cool, non-stimulating diet and careful regimen. Care ought to be taken to retain for the inspection of the doctor every bulky thing that is discharged, so that he may judge as to whether the entire ovum has been expelled or not. In such cases all that will be needed is possibly slight acceleration of the final stage of the abortion by gentle traction upon its presenting point after it is well into or through the os uteri, combined with pressure upon the fundus uteri by the hand on the abdomen. Still even such easy cases require careful watching, because the hæmorrhage is apt to be serious, and the ovum, if slow to separate, is liable to become putrescent.

But what I have most to object to is a wholesale practice of what is called plugging the vagina, which is practised almost universally in such circumstances. Plugging the vagina may be so conducted as to arrest the most severe uterine hæmorrhage, but in that case the vagina must be carefully packed with the material used as a plug, every corner of it being tightly filled. But what I object to is plugging as it is ordinarily practised. I frequently see cases in which three or four pieces of lint, each about the size of a walnut, are inserted into the vagina, connected together with a piece of string. These are left to act as sponges to stimulate the hæmorrhage, and as foreign bodies to become foci round which putrescence of the blood and vaginal secretions may arise. The practitioner, flattering himself that he has put his patient in a condition of safety, seeing he has *plugged the vagina*, goes about his duty with a quiet conscience and a calm spirit. All the while, however, I maintain he is resting in a false security, and the action he has taken may increase the risks, but certainly cannot lessen those of his patient. The plug is a positive danger to her, in that it engenders in her attendant's mind a false sense of security, whilst it at the same time increases her risks of putrid absorption.

Other forms of plug are used, such as a greased handkerchief round a sponge, or a distended ball, or what is called a colpeurynter.

But, so far as I am able to judge, these methods of plugging are all alike worthless in arresting hæmorrhage, if such is present worthy of the name, and all are alike objectionable, inasmuch as they lead to the retention of putrescent materials in the genital passage, thus directly provoking septicæmia, whilst they tend to throw the practitioner off his guard. Doubtless in many such cases no harm is done. The doctor goes his rounds, returns to his patient, removes the plug, and watches the case to the end. But in such cases I do not hesitate to affirm that the introduction of the plug was wholly unnecessary. The reason that no harm results is that the bleeding was not great, and equally good results to the arrest of hæmorrhage, without the introduction of any other risks, would have been obtained by withholding the hand. I am deeply convinced that, had there occurred in such cases hæmorrhage worthy of the name, and such as to warrant the use of a plug, such plugging would have been utterly futile to arrest it. The success of such treatment, I therefore maintain, is *post hoc*, and not *propter hoc*, whilst the risks involved in their use are not inconsiderable.

In stating the matter thus strongly, let it not be thought that I undervalue the use of plugging the vagina in cases of uterine hæmorrhage arising either from abortion or other cause. I have frequently plugged the vagina in abortion cases, and I can look back to at least two cases where plugging the vagina appeared the only means whereby the patient's life could be, and was, saved. But in these cases the bleeding was really serious, and the method of plugging was thorough. In such cases every corner and cranny of the vagina has to be packed with pledgets of cotton-wool or lint, about the size of a walnut each. It is better to steep them in solution of the bisulphate of iron, which is mildly astringent and decidedly antiseptic, or in a two per cent. solution of carbolic acid; and the plug should not be allowed to remain more than from twelve to twenty-four hours. The plugging in the earlier part of the process is to be conducted with the aid of a speculum. If a Sims speculum be at hand, it is the most suitable form to employ. In the latter part this instrument may be dispensed with. The whole is finally to be kept in position by a T bandage. I have occasionally, but not frequently, been compelled to perform this method of plugging in abortion cases. I have frequently seen one or other of the other methods mentioned; but I have never been satisfied that any beneficial results were obtained from them, and consequently I have never felt myself warranted to employ them.

My opinion therefore is, that in the ordinary run of cases, in which the hæmorrhage is not specially profuse, we ought to trust to ergot by the mouth, or to ergotine subcutaneously, and that we shall most probably find all will go on right, except that we shall have to hurry the conclusion of the case with slight manipulation, and that wholesale imperfect plugging of the vagina is to be strongly deprecated. If, however, hæmorrhage is severe, then active measures must be taken to empty the uterus *tuto, cito, et jucunde.* For, as in a case of hæmorrhage from placenta prævia, we never feel comfortable in an abortion case till the uterus is thoroughly emptied. I believe, also, that much more harm is likely to result from undue caution than from undue interference in such cases. At least, experience has led me to believe that the majority of our professional brethren are more apt to err in this particular through defect than through excess of activity. The result is that their patients are liable to be landed in troubles that are much more serious than any dangers, real or imaginary, connected with thorough evacuation of the uterus. To put it plainly, I consider a patient is put to greater danger from a portion of the membranes being left in the uterus, to become organized there and a source of persistent menorrhagia, than she is likely to suffer from the manipulation necessary to secure complete removal of every part of the ovum in a miscarriage.

If the cavity of the cervix is sufficiently dilated so as to permit its being traversed by the index finger, then by chloroforming the patient and introducing the one hand into the vagina, while with the other you depress well the uterus, it is usually possible to explore in detail every portion of the inner surface of a uterus at the third month, to make out whether the ovum is entirely or partially separated from it, and to break up any adhesions that may exist between the ovum and the uterus. Then, after the ovum is completely isolated from the uterine walls, a very moderate amount of pressure upon the fundus is sufficient to expel enough of the ovum through the open cervix to allow of its lower pole being gently grasped between the index and middle finger of the hand in the vagina, and in that way removed.

At one time I used forceps for the removal of abortions, and many such are made. In the *Chicago Medical Journal* for June 1879, a paper by Dr H. A. Martin of Boston is devoted to demonstrate the value of a particular pattern of such an instrument. But forceps are liable to catch the uterine wall, and my conviction is that the best abortion forceps is the human fingers; and they have at least one advantage over every other instrument, that you can never forget them or leave them behind you.

In the meantime, it is advisable to have the patient well under the influence of ergot, whether the drug is administered by mouth, subcutaneously, or per rectum. If the abortion has been long on the way, it is advisable to wash out the interior of the empty uterus with a two per cent. solution of carbolic acid, and then make the patient comfortable and let her rest. Suppose, however, as frequently happens, the cervix is not sufficiently dilated to allow the index finger to pass it, and the bleeding is serious. These are the class of cases that one usually meets with as examples of imperfect and useless plugging of the vagina. If the practitioner is able to stay with his patient, no objection can be made to plugging the cervix by means of a pledget of lint, except that it is only partially effective as a hæmostatic, is somewhat difficult to insert, and liable to be soon expelled. But the method of all others the safest, speediest, and most agreeable is to introduce a sponge-tent into the cervix, and leave it there from two to four hours. During an abortion a tent is never difficult to introduce, as there is almost always a considerable amount of dilatation at the inner os, so that a moderately large tent may be passed with ease. Besides this, the resistance to dilatation in the neck of the uterus is not specially great, so that the tent rapidly expands, and will be found fully dilated in three or four hours at most, and thus septic changes are not likely to be set up by the tent. The gradual distension of the tent acts as an efficient plug against hæmorrhage. At the same time, the stimulus of the dilating tent reflexly operates upon the uterus, promoting contraction of it. In this way the abortion is hurried to its close, the ovum being gradually isolated from the uterus, and the hæmorrhage is doubly guarded against, *i.e.*, no blood can pass the cervix, and the bleeding points in the uterine surface are at the same time diminished in size by the uterine contractions.

The practitioner may with tolerable certainty calculate upon two hours' safety from danger after the introduction of a sponge-tent into the cervix uteri in a case of abortion, if the cervix is tolerably tight at the time of insertion. Meanwhile, he is at liberty to attend to his other patients, feeling assured that, so far as the abortion is concerned, his patient is safe from the immediate danger of hæmorrhage, and that time is being gained the while. If on his return he finds the tent loose and the cervix well dilated, there only remains to empty the uterus in the manner above described, and wash out its interior with solution of carbolic acid, if thought necessary.

It is sometimes recommended to depress the uterus so as to bring the outer os to a level with the vulva in abortion cases, by means of a volsella inserted into the cervix, so as to bring the cavity of the uterus within reach of the examining finger, as we are wont to do in the removal of fibroid polypi, and in many operations upon the cervix. This plan has been ably advocated by Professor A. R. Simpson. There is no doubt but this is an efficient method, but it appears to me that in abortion it is seldom necessary, as it is almost always easy to empty the uterus with the hand or finger in the vagina, and the help of the outside hand to depress the uterus. And while we all know that it is possible to depress the uterus so as to bring the outer os into the vulva without danger, I confess to an aversion to subject the uterine pelvic attachments to unnecessary strain. It may be only superstition, but with me the feeling is sufficiently strong to keep me from unduly depressing the uterus, except it is unavoidable. It is further to be remembered that when adhesions exist between the pelvis and the upper part of the neck and lower part of the body of the uterus, such depression of the cervix is not only dangerous but impossible.

In certain cases in which the great bulk of the ovum has been expelled, and from examination of the discharge you are not satisfied that the whole has come away, and yet you find the cervix is not sufficiently dilated to allow a finger to pass it, the use of a copper curette, such as this which I show you, will be sufficient for all the requirements of the case. In the first place, by ransacking the interior of the uterus with it you will be able to determine whether any portions of the membranes are still left. In the second place, you will be able to remove them without danger of injuring the uterus.

I must be allowed to say here, however, that Dr Paul Mundé's curette appears to me too slender to be useful for this purpose, and that before you can satisfactorily employ a curette in the removal of remaining portions of an abortion the cervix must be at the time in a more than ordinary dilated condition, or be first artificially dilated so as to allow of the introduction of a larger and more powerful curette, such as the one shown.

After the use of the curette the interior of the uterus ought to be washed out by means of a double catheter with a two per cent. solution of carbolic acid. In this way the necessity for artificial dilatation of the cervix may be frequently avoided. It ought also to be remembered that in the course of an abortion, even though the haemorrhage is ever so slight, the onset of fever and any evidence of absorption of putrid matters into the woman's blood from the ovum is to be looked upon as warranting us in emptying the uterus at almost any cost. This view of the case is strongly urged by Dr J. Veit, *Zeitschrift für Geburtshulfe*, b. iv. s. 163. You will find an abstract of this paper in my monthly retrospect in the *Edinburgh Medical Journal* for September 1879. Most of us can look back to cases of putrid abortion in which, after completely emptying the uterus, threatening symptoms from septic absorption have, to our great relief, disappeared, so that we will feel inclined to agree with Dr Veit in this matter.

## III.—*After Treatment of Abortion.*

So soon as the uterus is perfectly emptied, and, if thought necessary, disinfected by being washed out with a suitable solution of carbolic acid, the patient should be kept in bed for a week at least. The harm that is done by getting up too soon after abortion is incalculable. It is a common proverb that "it is better to have a broken leg than a bad sprain." There is no doubt that it is frequently better for a woman to undergo a severe labour than an abortion. The reasons are similar in both cases.

The necessary inconveniences and legitimate risks associated with a bad sprain are certainly not so serious as those that follow a fracture of the leg; but the fracture compels the patient to take the quiet essential to a cure, whilst the sprain does not do so. In like manner, a patient is compelled to submit to the necessary treatment and rest after a bad labour, whilst she does not regard an abortion as making similar demands upon her. The result is, that sub-involution, chronic metritis, with catarrh of the cervix or body or both, perimetritis, parametritis, and oöphoritis, displacements, etc., are extremely apt to follow in the wake of abortion. As there is the best reason to believe that these are not the necessary results of carefully managed abortion, but follow very generally at least from neglected abortions, it is of the utmost importance to insist upon a due amount of rest until the involution of the uterus and vagina has become completed. I know of no exact observation upon the subject; but there appears every reason to believe that the small uterus at three months does not require so long time for its involution as the large organ at nine. Accordingly, while it is inadvisable to allow a patient to get out of bed before a fortnight after delivery at term, it appears safe enough to permit a patient to rise at the end of a week in the case of an early abortion. But active duties ought to be suspended for another week, so that a full fortnight at least ought to be allowed for recovery from an abortion.

As the risks from septicæmia in connexion with abortion are considerable, and the more so if the ovum has, from whatever reason, become putrid before its expulsion, or even if the abortion has been long in the way, the greatest care ought always to be employed, by the use of antiseptic vaginal and, if need be, uterine washes, to avoid absorption of putrescent materials. The maintenance of efficient contraction in the uterus is also a considerable safeguard against absorption of such materials through the venous channels, at least, and this should be aimed at by the diligent use of ergot. The results of ergot upon a small uterus, with its muscular wall only imperfectly developed, are, of course, less to be trusted to than in dealing with a uterus at term, when the muscular wall is powerful, so that we ought to depend most on cleanliness and antiseptics.

But it not unfrequently happens that hæmorrhage of the most severe kind follows after we have completely evacuated the uterus, the feebly acting organ refusing to contract upon the uterine vessels to seal them up. It is in such cases, *par excellence*, that I consider plugging is of the greatest value. But then the plugging must, to be efficient, be *thorough*.

### IV.—*Treatment of After-Effects in Ill-Cured Abortion.*

Proceeding now to the consideration of the evil after-effects of ill-treated abortion, I may state that the leading symptom for which patients seek aid at hospital in such cases is exhausting menorrhagia. This is frequently severe, and by the time they have made up their minds to apply at the hospital, or have been sent thither, the patients are usually reduced to a degree of extreme anæmia. The history of such cases, as given by the patient, is various.

It not unfrequently happens that the patients have never applied for medical relief, but, having suddenly aborted with a moderate amount of hæmorrhage, have never taken the slightest precautions, have never laid up, or even lessened their attention to their ordinary duties. On the return of the next menstrual period they have found the amount of flow specially great, and at every succeeding menstrual period up to the time at which they apply the discharge has tended more and more to be profuse, till ultimately it has become threatening to life. In other cases a medical man has been in attendance who has proceeded upon the principle of letting nature have its course—a very good general principle, but one that admits of numerous exceptions, or else our art would have no apology for its existence. The discharges were carefully watched; possibly, however, a vaginal examination, for some reason or another, has not been made throughout the entire management of the case, and the patient has been told, seeing that no lump such as was anticipated has come away, that no doubt the abortion has been gradually removed in minute portions, and that by-and-by all will ultimately come right. It does not do so, however, but the patient is the subject of constantly repeated hæmorrhagic seizures; and if an examination is made even a month or six weeks after such an abortion occurred, the cervix will frequently be found patulous, and probably a placental polypus will be detected projecting through the inner os uteri.

Let it not be imagined that I am at present indulging in a saunter through the region of romance, for if it were prudent, right, or necessary, which it is not, I could name actual cases in support of what I assert. It was the fact of repeatedly meeting such cases that chiefly impelled me to bring this subject before the Society. I think the members of our department of medicine need to have it strongly urged upon them that abortions all over require to be dealt with by a firmer hand than they have hitherto believed, and that the danger of interference in them is not great. On examining all those cases we find the uterus soft and flabby, as well as somewhat enlarged.

In the case of some of them, the placenta, or portions of the decidua left adherent in the interior of the uterus, has undergone a low kind of organization, has formed what in this country we call placental polypi, and what in Germany they style *Placentarreste*. When these are present it is not uncommon to find considerable dilatation of the cervix persistent, so that its cavity, months after the abortion, is traversable to the examining finger. But in other cases it would appear that mere relaxation of the muscular wall of the uterus, and the presence of a congested, probably granular condition of the mucous membrane, is all of a pathological nature that can be found.

In the first class of cases the uterus may be emptied without any antecedent dilatation process. The polypi are to be broken off by the finger, or scraped off with a blunt copper curette; the uterus then washed out with solution of carbolic acid; and possibly, with rest and ergot, all will go well. The solution of the pernitrate of iron is doubly useful in such cases as an internal medicine; it meets the requirements of the system for iron, while it acts at the same time as a powerful hæmostatic.

In those cases in which the cavity of the cervix is tightly closed, I have long been of opinion that the most efficient means of treatment is the use of a tangle or sponge tent. Before the use of the curette became so general, we were in the habit of dilating such cases, and although finding nothing in the uterus to remove, we almost always observed that the hæmorrhage ceased. The possible explanation was that the irritation of the tent stimulated the flabby uterus, made it firmer, and less inclined to bleed.

It very often results that after such dilatation, when you scrape the whole of the interior of the uterus with a copper curette, you find that nothing will come away. On other occasions you find that soft, thickened fungous patches of hypertrophied mucous membrane peel off freely from a particular portion or portions of the area of the body of the uterus. There is no doubt but the removal of them is necessary to the restoration of healthy action of the mucous membrane of the body of the uterus. I have again and again drawn the best results from such procedure, and never saw any serious accident follow the treatment. But it requires to be carried out with the greatest caution.

I have accordingly come to believe that in the treatment of severe and exhausting hæmorrhage, continuing for months after an abortion, the proper treatment is to dilate the cervix with a tangle tent, and explore the cavity of the uterus, unless the cervix is so open as to allow exploration of the cavity of the body without dilatation. If, then, any considerable portion of lowly organized remains of the abortion are present, they may be removed with the finger-nail. If, however, there is only present an irregular soft condition of the mucous membrane, then the surface ought to be scraped with a copper curette. I doubt, however, whether it is safe or frequently practicable even to apply the curette until the cervix uteri is previously dilated, though this is recommended by Boeter, Mundé, and other authorities, all of whose opinions are deserving of the greatest respect and consideration.

## ARTICLE III.—*On a Case of Molluscum Verrucosum, presenting certain Unusual Features.* By JAMES NEVINS HYDE, A.M., M.D., Professor of Dermatology, Rush Medical College, Chicago.

(*Read at the Third Annual Meeting of the American Dermatological Association in New York, 27th August* 1879.)

ON the 16th of August 1878 Dr Daniel T. Nelson, Professor of Physiology in the Chicago Medical College, sent to me for diagnosis and treatment a patient affected with a cutaneous disease presenting certain rare features. The latter gave a sufficiently clear history of his case, which was subsequently corroborated and supplemented in a letter from his attending physician.

His name was John Wagner, aged 35 years; height, 5 feet 2 inches; weight, 215 pounds. He was a native of one of the Lower Rhine Provinces, and had married, when 23 years old, a healthy young woman who had never been ill. They had three healthy children living; and neither his nor her parents had ever exhibited symptoms of cutaneous disease. His father was living, in his 97th year, and enjoying good health. In his native land he had served his time as a soldier, and after coming to this country, about ten years ago, had engaged in the sale of groceries and beer, a common business in the part of the city where he resides. He denied in the most positive manner the previous existence, in his case, of any form of venereal disorder, and, indeed, stated that he had never in his life suffered from any disease of consequence.

Between two and three years ago he began to notice over the left buttock numerous white spots or points, about as large as pin-heads, which gradually extended by multiplication, at first upward over the loin, then downward upon the inner and outer faces of the thigh, the corresponding surfaces of the other side gradually becoming similarly involved. These finally exhibited the features now visible, and thus continued until one year after their first development, when they disappeared. After this event his wife remarked to him that she could still see the "red spots" in his skin where the disease had formerly existed. Three months afterwards, one year and a half prior to date, the disease reappeared in the localities where it was first noticed, viz., over the buttocks, and has since extended, spreading first upward and then downward, until the present development has been attained.

The lesions have, from the first, been attended by no subjective sensations whatever. No itching, ache, burning sensation, nor pain has ever been occasioned by the eruption. The latter has, in short, never given him the slightest inconvenience of any kind, his reason for applying to a physician being the out-cropping of a few lesions on the dorsal aspect of his hands, which he fears may excite the suspicion of his customers when he deals out to them groceries and beer. He has never resorted to any species of internal or external medication, with the single exception of a few doses of sulphur, which he swallowed morning and night for a few days at the suggestion of his wife. He thought that while ingesting this remedy the eruption became more vivid.

His appetite is excellent, his dejections normal, his digestion unimpaired. In short, he believes himself to be in perfect health. He smokes tobacco occasionally, and drinks about ten glasses of lager-beer daily, never spirits of any kind.

Dr Nelson's letter, referred to above, relates the following facts :—

"I first prescribed for Mr John Wagner in November or December 1876, for some slight derangement of the stomach. About the same time he called my attention to an eruption upon his arms and legs. I at first supposed this eruption to be connected with the gastric disorder, but learned afterward that the disease of the skin had been noticed a year or more before. It continued after the disturbance of the stomach had passed away. I prescribed the iodide of potassium, with the idea that it was perhaps a form of syphilitic disease, though this did not seem clear; neither, according to his statement, had he exhibited primary symptoms. Examining the eruption afterward with greater care, I punctured what I supposed was a pustule, and was surprised to find in it no pus, but only what appeared to be blood. . . . Of his family history I know little. He lost, under my care, an infant with cerebro-spinal meningitis in February 1877, aged 21 months. Another, he tells me, had previously died of cholera infantum, ill two days. He has three other children in excellent health, aged respectively, eleven, nine, and two years."

When examined by me the patient was seen to be a healthy-looking German, with the big belly which results from free indulgence in beer-drinking, but also with well-formed muscular limbs and a remarkably clear tint of the skin. He has blue eyes affected with myopia, dark hair, and florid complexion. His tongue is clean, his teeth and gums in a sound condition. He is quite intelligent. Having satisfactorily passed the army examination, he is, as might be expected, free from deformity.

Upon the surface of the skin appear a large number of variously disposed lesions, which may be described as follows :—

The integument of the trunk, thighs, arms, and legs to the level of the tops of his boots, displays an eruption of papular type. The head and face are not affected; a few isolated lesions appear upon the neck, above the line of the shirt-collar. The feet and legs below the level of the tops of the boots are exempt. The same is true of the palms of the hands; but a few scattered lesions can be seen upon the dorsum of the hands, and three or four are located upon the inter-digital spaces. The genitals are free from involvement. The lesions are symmetrically distributed as regards the two lateral halves of the body; they are, however, much more abundant above than below the circumference of the trunk at the umbilicus, being very abundantly dispersed over the gluteal region, and the superior lateral and posterior surfaces of the thighs, in which localities, also, the darkest shades of colour are manifest. A diamond-shaped space, its diameters 15 and 12 centimètres, the former vertical, its lowest angle continuous with the cleft of the nates, exhibits no lesion, and is thus in striking contrast with contiguous tracts of integument where the eruption is plentifully developed.

Over the gluteal region the lesions are more compactly crowded together than in any other portion of the body, and here, by actual count, from 12 to 14 can be distinguished in a space one centimètre square. As has been stated, they are here also of deeper colour and attain their largest dimensions. Above the umbilicus, on the superior anterior and posterior portions of the trunk, the lesions are much more sparse, as well as smaller and lighter-coloured, isolated papules occurring four, five, and more centimètres distant from any others.

The aspect of these lenticular lesions is, in each instance, characteristic and peculiar. They vary in size from a small pinhead to millet-seed and to split-pea, being well rounded in contour, never squarish, projecting from the surface to the extent of from one to three millimètres, with a globoid profile. The summit of each is neither umbilicated, flattened, nor acuminate, but strictly globoid. No pathological products are distinguishable upon or near any one of them; there is neither scale, crust, scab, concrete pus, pustule, nor vesicle visible upon the surface. The lenticular projections do not primarily invade either the pilary or sebaceous follicles. Occasionally a hair may be seen perforating a single lesion, but in these exceptional instances the point of exit may be at the base or side of the lesion. No instance of perforation of the apex by hairs can be discovered. Perspiration occurs normally and abundantly from the affected surfaces.

The lesions themselves involve the entire thickness of the integument, and are surrounded by an unaffected and entirely healthy skin, free from acneiform eruption, scratch-lines, dirt-collections, and cicatrices. There is no infiltration, œdema, nor areolæ of a congestive or inflammatory type.

The newer lesions, which are, as a rule, found isolated and distant from the portions of the skin first affected, are of a dead-whitish hue, and much resemble the sebaceous gland elevations known as milium. As they enlarge and multiply they assume at the base and sides a rosy-pinkish colour, and have a waxy-white summit. The largest and oldest bodies have a delicate crimson colour, which is intensified by the aggregation of the lesions, but never suggests the purplish or violet shade of passive congestion. This crimson tint is perceptible to the extent of a little less than a millimètre from the base of each. As in the case of the smaller lesions, each of the larger possesses the waxy-whitish summit already described.

The peculiar appearance of this summit is highly suggestive of a purulent focus beneath, or of a small pin-head-sized mass of inspissated sebum. When, however, a needle is introduced perpendicularly into this summit, at right angles to the plane of the adjacent integument, its point being thrust sufficiently deep to encounter any collection of pus or sebum were such present, its withdrawal is followed by a drop or two of a clear, dark reddish-coloured fluid, having all the appearance of entirely healthy blood. In every instance where the apex of any one of these lesions is tapped in the manner described the result is the same. In no case can either pus, sebum, a milky fluid, or a granular or lobulated mass be obtained by expression from any one of the bodies which resemble papulo-pustules. The same result is obtained when any one of these is violently ruptured by compression between the thumb-nails, a feat which, though apparently easy of execution, is really difficult, in consequence of the compressible character of the cutaneous elevations. No other contents are found when a single projection is completely split in half by the blade of a lancet. The blood-resembling fluid flows at first in drops, then oozes merely, and in the course of a few moments finally ceases to appear.

Passing the finger over the affected surfaces, the impression produced is suggestive of the variolous papule before the stage of pustulation. Under firm pressure the lesions are felt to be somewhat elastic and to diminish perceptibly in size, receding, as it were, beneath the skin, but not disappearing, and still producing to the finger the sensation of an hyperplastic growth. On removing the finger quickly a milky-white patch becomes visible, corresponding to the area of contact, in which the depressed bodies appear whiter than the surrounding integument. The habitual colour of the space thus impressed is resumed in a period of between two and four seconds, supposing that the region of fullest development has been selected for the experiment.

In such regions—for example, the surfaces of the buttocks and the thighs immediately below the nates—there is a tendency to irregular grouping, two, three, and more of the bodies becoming so united that their individual characters are lost. But this apparent grouping is seen to be due merely to the crowding together of the eruptive elements. In every such aggregation, however, the minute whitish apex of each individual component of the cluster can readily be detected by the eye, even more readily when the eye is aided by an objective of low power.

Viewed with a ray of light falling transversely, the whitish summit of each papule is seen to be convex, smooth, translucent, and glistening, suggesting the capsule or roof-wall of a firm, well-rounded vesicle. In no case is there a trace of follicular orifice, hilum, punctum, or depression.

Under an objective of one-fifth inch focal distance the fluid which escapes from the lesions is seen to be entirely healthy blood. The red corpuscles are normal in size, contour, colour, and refractive effects. No pathological fluid nor cellular mass can be detected in any field thus examined.

I made frequent subsequent examinations of this patient during the succeeding months of the summer of 1878. It will be remembered that the range of atmospheric temperature was exceptionally high during that season, and the effect upon the skin of the patient was made evident in an excessively abundant transpiration of sweat. He could with difficulty remain in an apartment without removing his coat and waistcoat, and even after such removal the perspiratory fluid usually accumulated in such quantity as to drip from his nose and chin and to flow in little currents down the integument. With this single exception, there was nothing worthy of note in his condition, save the gradual involution of the lesions of the skin as the cooler weather of the fall and winter approached. By January of 1879 the eruptive disorder had almost entirely disappeared. The regions formerly involved were merely covered with purplish and reddish maculæ of petechial appearance, the colour of which did not vanish on pressure. It has been said that there was an "almost entire" disappearance of the lesions. The region of most plentiful development was free from any projecting points, but yet here and there over other parts of the body the minute, milium-like elevations could be seen. Each of these, when punctured, gave exit to normal blood, as heretofore described.

To this condition there succeeded, in proportion as the winter weather moderated, a marked recurrence of all the symptoms of the preceding year. By the 15th of last April numerous lesions had appeared, similar in aspect to those observed in the previous year, though somewhat less developed. They differed, however, to a marked degree in this particular, that they rested upon the purplish maculations which could still be distinguished as the sequelæ of their predecessors during the past season.

On the 22d of the same month I made an examination of this patient in the company of Professor E. L. Holmes, Dr Charles Gilman Smith, a member of this association, and Dr E. S. Atwood, late assistant in the Skin Department of the Central Free Dispensary of Chicago. These gentlemen were much interested in the case, and carefully examined the patient. In their presence I inflicted a wound, not exceeding one millimètre in depth and width, upon the apex of a single typical lesion, and from this there flowed, in drops, for over twenty minutes, a pure dark-red blood. On this occasion Dr Smith made in vain an attempt to express the contents of a single lesion by compressing it between the thumbnails. Deep indentations were left in the skin upon either side of the projecting mass as the result of this violence, but no trace of a milky or chylous fluid, sebum, or lobulated mass of gland tissue, could be obtained from his experiment.

At this time, also, Professor Holmes kindly assisted us in making an ophthalmic examination of the eyes. It has been stated that the patient was affected with myopia; and although it seemed highly improbable that this disorder of vision had any connexion with the cutaneous disease, still it seemed necessary to exclude any such possibility by actual observation. Dr Holmes reported the result as follows:—

"There is evidently no relation between the abnormal condition of the eyes and that of the skin in the remarkable case you permitted me to examine.

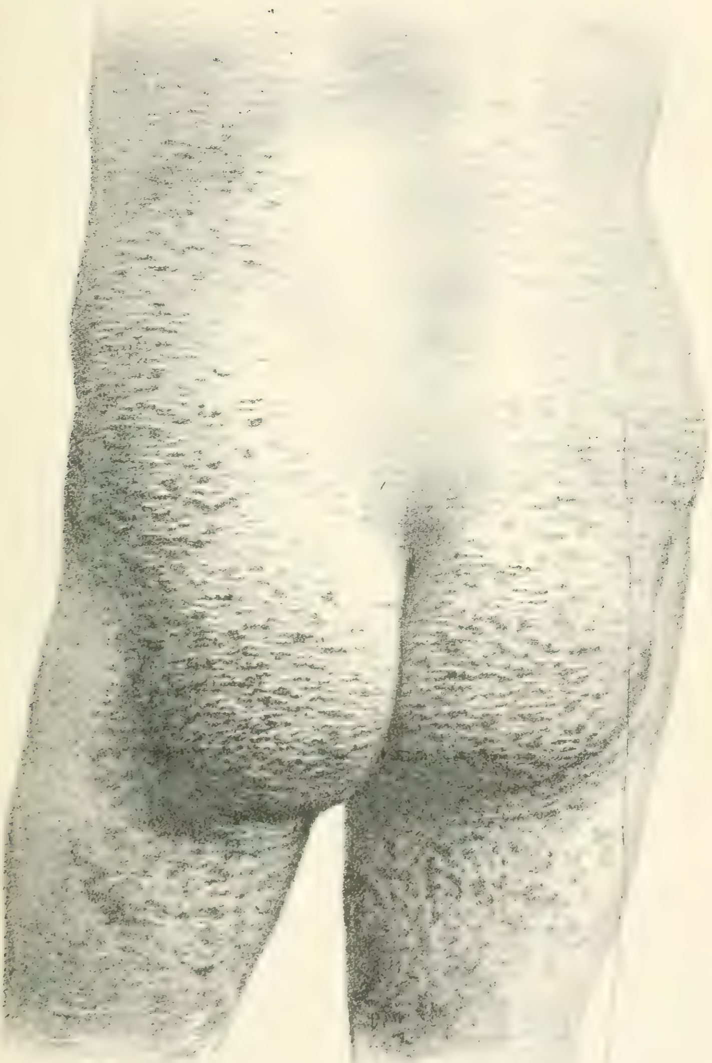
"There is a very high degree of non-progressive myopia, which I think has existed since childhood. The patient has never worn spectacles. He states that he can read without discomfort day or night continuously, the page being placed four or five inches from the eye. With concave glasses No. 6, which he selects as best aiding distant vision, the patient can distinguish only at ten feet letters which should be read at a distance of 100 feet.

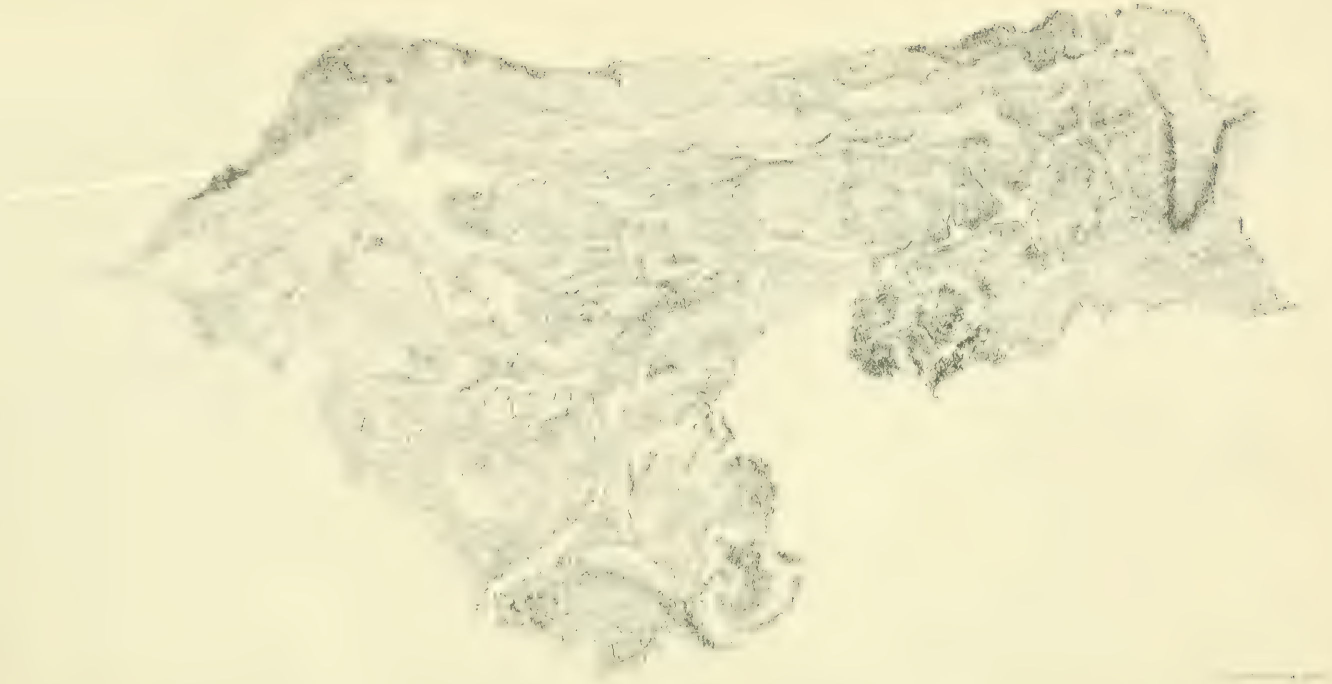
"A very large and regular conus nearly surrounds the optic nerve disc of each side. In other respects the fundus appears quite normal."

Perhaps it should be here added that Wagner at this time informed us that none of his brothers or sisters were myopic, although one brother had suffered from granular lids.

Early in the course of this investigation I had excised an entire lesion of the largest size, and requested Professor Danforth, who is specially expert as a practical microscopist, to make the sections requisite for an investigation of the pathological character of the specimen. Unfortunately this work was entrusted to an assistant, and an accident in cutting so mutilated the fragment as to render it unfit for the end in view. A portion, however, less injured than others has served to aid in the exclusion of at least one pathological process. We shall return to this part of the subject later.

It was hoped that with the increase in the temperature of the present season the lesions of the skin might again develop to the extent noted last year. This seemed the more probable as there had been in the month of April a decided promise of such complete recurrence. In the expectation of being thus enabled to secure another portion of the skin for examination, on the 12th of July last I met the patient by appointment in the company of Dr Lester Curtis, Professor of Pathology in the Chicago Medical College. To my surprise the lesions which were evident in April had not only failed to develop as formerly, but had disappeared. I could not even demonstrate the characteristic lesions to my colleague. I found upon the thigh of the left side three small pin-





75 Diameters. 1-inch Object. C Ocular.
(Specimen mounted in Damar.)

head-sized elevations with a faintly whitened apex. These, however, when punctured, gave exit to the same fluid blood, which, as in all previous experiments, appeared quite normal under the microscope, and unmingled with any foreign or pathological product. The integument, where the eruption noticed in April had been seated, displayed the same purplish stains which followed each resolution of the disorder, and could be distinguished by their fresher tints from the sequelæ of the very earliest lesions observed by me.

It should be added that the atmospheric temperature at this last-mentioned date was, and had been for some time previously, fully equal to that of the corresponding time of the year 1878, and that the excessive perspiratory secretion of the patient was still evident. With this single exception, he had had no constitutional symptom of any significance, and his disorder of the skin had been unaccompanied by subjective sensation.

Throughout the period in which I have had this patient under observation there has been no resort to internal or external medication. The opportunity was thus afforded of studying the evolution of the malady uninfluenced by medical interference of all kinds, a course which was rendered practicable by the absence on the part of the patient of all cause of suffering or complaint.[1]

A diagnosis in this case was, at the outset, not readily established. In the fall of 1878 I addressed a note to the president of this society, enclosing a photograph of the patient and a brief description of his condition. Dr Duhring responded, under date of 16th November, by stating that the photograph did not suggest to him any disease with which he was familiar, though the appended description was to him full and satisfactory. This statement certainly argued in favour of the rarity of the affection.

Having in view merely the fluid which escaped after puncturing the lesions, one is naturally led to consider the possibility of its escape from a telangiectasic or lymphangiomatous new growth. But, as regards the former hypothesis, it is excluded by the entire absence of visibly distended bloodvessels, the varioliform appearance of the larger bodies, their symmetry of distribution, their multiplicity, and the failure of profuse hæmorrhage when deeply wounded. So, too, would the absence of a lymphous or chylous discharge seem to forbid the supposition that this case had been described by Professor Kaposi under the title of lymphangioma tuberosum multiplex.[2] Still the two cases were, in a clinical point of view, somewhat similar; and the suggestion that they might be also pathologically alike, was strengthened by the fact that it is not stated in the text whether there was a chylous or sanguineous discharge from the lenticular bodies described by Kaposi. It will be remembered that the diagnosis in the case to which reference is now made rests upon the microscopical discovery, by Biesiadecki and the author, of certain slit-like spaces and cavities lined with endothelium. Comparing these results with the valuable and exhaustive researches of Dr S. C. Busey of Washington, D. C. (*vide Congenital Occlusion and Dilatation of Lymph Channels,* New York, Wm. Wood & Co., 1878. Also "Narrowing, Occlusion, and Dilatation of Lymph Channels, Acquired Forms," p. 195, reprint from *The New Orleans Med. and Surgic. Jour.*, No. 3, 1876, to No. 8, 1878, inclusive.) We discover that, in the cases collated by the author last named, there was always grave constitutional impairment due, generally, to the waste of lymphous fluid. Of his female patient Kaposi writes that, "the general health was not impaired."

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[1] An oil painting representing the surface of the skin, displaying the fully-developed lesions, was then exhibited by the reader.

[2] Hebra "On the Diseases of the Skin," *Sydenham Soc. Trans.*, vol. iii. p. 387. London, 1874.

These questions, therefore, naturally arose: was Prof. Kaposi's case a true lymphangioma? If not, was not its pathological history, as well as some of its clinical features, identical with that here described? And, lastly, may a lymphangiomatous tumour give exit to blood?

With regard to these questions, I quote from a letter received from Dr Busey, to whom I sent a photograph and notes descriptive of my patient, and who has kindly taken great interest in the explanation of its peculiar features. It will be remembered that Dr Busey, residing in Washington, enjoys the rare facilities afforded by the library of the surgeon general's office, U. S. A.

"The clinical history of your case established a close relationship between it and the case described by Kaposi, but the absence of intercommunicating slits, spaces, cavities, and vascular continuities, lined with endothelium, and of a lymphatic or lymph-like fluid, exclude it from the category of lymphangiomata. . . . The exit of a bloody fluid does not necessarily exclude the probability of a lymphatic development. The colour of the fluid exuded is very variable, and in some cases it has exhibited to the naked eye all the appearances of blood, but when permitted to separate into a clot and fluid, unmistakable evidences of its lymphatic character have been demonstrated.

"Maas found in three cases of hypertrophy of the tongue a cavernous tissue, the caverns containing red blood corpuscles and fibrin coagula. He concluded that the caverns were thin-walled veins. Arnstein observed in a case of macro-glossia two kinds of caverns in the parenchyma of the enlarged glossal papillæ: one, round and filled with red blood corpuscles and fibrin threads; the other, irregular and sinuous, with granular contents and scattered lymphoid cells In the case of Sydney Jones, Mr Stewart demonstrated two forms of spaces or cavities: one, large and freely communicating, lined by a continuous layer of endothelium; the other form communicating with bloodvessels and filled with blood.

"These conditions suggest the probability that the cutaneous papillæ observed by you may be blood vascular formations. Blood and lymph developments occasionally coexist in the same subject. In my own case there were blood new formations and lymph developments in close proximity—in fact, one of the lymph vesicles was located in the centre of a nævous, and others immediately about its margin."

Thus much for the two hypotheses suggested. Respecting now the possibility that the case here reported was one of molluscum, we are at once confronted with several objections whose force, however, is much weakened by the considerations which they suggest. The molluscous eruption, designated by Bateman *contagiosm*, and by this association, in its adopted classification, *sebaceum*, does, without question, in several of its phenomena resemble the case I have here described. It is a rare disease of the skin, and many of those now present remember the interesting paper on this subject, read at the first annual meeting of the Amer. Derm. Assn., by Dr Geo. Henry Fox of New York ("A Clinical Study of Molluscum Contagiosum," reprint from the *Chicago Med. Jour. and Exam.*, May 1878). In this paper no less than twenty-five cases were collated and compared, and yet of this relatively large number, in only one case were more than fifty mollusca observed upon one individual, and then one hundred were counted beneath the chin. In the case of a patient seen by me with Dr Rosswell Park of Chicago, a description of which is published in the *Chicago Med. Jour. and Exam.* for Dec. 1878, p. 593, there were between fifty and seventy-five typical growths below each knee, a few on the thighs, and others over the neck and chest. As contrasted with these rare developments of a rare disease, we are impressed, in the case of Wagner, with the much greater development of the lesions by multiplicity; and, incidentally, with the absence of a constricted base; of a central depressed orifice; of whitish, milky, curdy, or lobulated contents; and of a disposition of the tumours especially over the head, chest, and genitalia—all of which are recognised characteristics of molluscum sebaceum. Again, we find in the case under consideration a certain decree of symmetry, a recurrence of the eruption with the advent of hot weather, a subsequent involution and disappearance of the lesions, sequelæ in the form of pigmentary stains, an entire absence of all subjective symptoms, and, last but not least, the issue of blood when the growths were divided. It should not, however, be forgotten, that in some cases of molluscum recorded, there were few or no subjective symptoms, the bodies bled very freely after the expression of their more or less solid contents, spontaneous disappearance ensued after a longer or shorter interval, and the apparent cause of the disease was profuse sweating on the part of the patient, a process which more than one author has enumerated as one of the exciting causes of the disease.

Mr Hutchinson, of London, in an article on Molluscum contagiosum (*Lectures on Clinical Surgery*, vol. i. part i., London, 1878), gives the details of several cases in which there is at least a suggestion of some of the peculiar features of the case described by me. In the former, Mr Hutchinson seems to have been especially surprised at the *extent* of the eruption. He remarks (p. 12):—"I do not indeed know that the cases to which I now ask your attention have as yet been described by any author. In them the eruption is so copious that the greater part of the skin is almost covered. I have seen but few such, and in all the patient was an adult. One of them, a man æt. 46, came under my care at Blackfriars, and the state of his body is well represented in this portrait; you will notice that the little spots which cover his arms and trunk are for the most part so small that their true character as molluscum might even have been doubted." Then follows the history of the case, from which I quote the subjoined sentences:—

"Case of molluscum contagiosum, very abundant, and presenting peculiarities; many of the spots very small and lichen-like. James Thomas L., æt. 56, was sent to me with a very copious eruption of molluscum contagiosum. His case presented several features of unusual interest. His arms and trunk were covered with spots of molluscum of various sizes, some of them very small. They presented certain peculiarities, so that I did not at first recognise them. On the backs of the arms the eruption was very copious, but none of the spots were larger than No. 6 shot. Most of them were pointed, and they were so smooth and semi-transparent that they looked just like vesicles. I was astonished on touching them to find them all solid, and almost as hard as shots. On still more careful inspection, I found some from which small horns projected, and on seizing each horn with forceps, a small pellet of very firm sebaceous matter was extracted; I pulled out these from at least a dozen spots. Many spots showed small central depressions. On some parts two spots were joined together. On his back, breast, and shoulders there were many larger spots of the size of split pease, and in all stages of progressive ejection from the skin; some were quite pedunculated, and almost all were elevated and a little constricted at their bases. Many of those on his back were as large as swan-shots, flat-topped, and with budding growths from the interior of the gland. None of them contained any material quantity of fluid; they could be easily enucleated. There was no inflammation of the surrounding skin, and had been no pain whatever. It was perfectly evident that the spots were enlarged sebaceous glands, but I felt a little reluctant at first to think them merely molluscum contagiosum. Their abundance, small size, and the absence of fluid secretion, seemed points of difference; but my conclusion was that these were merely minor features and not of real importance. It seemed possible that he had caught the disease in a Turkish bath."

Mr Hutchinson proceeds to refer to other cases of somewhat similar character: in one, a healthy man 25 years old, had his chest, back, and abdomen covered with an abundant crop, some rather large, others small, of what the author calls "molluscum spots." In another case, that of a gentleman 33 years old, there were more than a hundred molluscum spots scattered over his trunk and limbs, which had been mistaken for syphilitic lesions, an error which my friend Professor Nelson admits that he committed in the case of Wagner, before he carefully investigated the lesions of the skin.

The resemblance between the features of Wagner's disease, and that of the first-mentioned of the Hutchinson cases, is not confined to the copiousness of the eruption, upon which the author lays so much stress; it extends also to the smoothness, transparency, and vesicular aspect of the lesions, their coalescence in places, and their semi-solidity, features which at first made the observer reluctant to believe that they were molluscous growths. But Mr Hutchinson had the great aid in effecting a diagnosis of the discovery of horn-like projections of dried sebum at the apices of certain of the bodies, which pointed unmistakably to their real character. "Many spots," he remarks, "showed central depressions." From this it might be inferred that there were some of the vesicle-like bodies which did *not* show a central depression — indeed, such a fact is really stated by implication in the language employed. Turning, however, to the descriptive part of the same paper, we read (p. 2) the following words: "The central depression just described is invariably present, and from its conspicuousness we get a clue to the anatomical structure of the tubercle." Mr Hutchinson is not singular in making this statement, as it is repeated in substance by several authors.

Here and there in the literature of this subject may be found a descriptive hint of the peculiar features now under discussion, generally, however, coupled with others which would seem to remove the cases in which they were exhibited to another category. Thus Bateman himself describes the existence in one of his patients of hard, smooth, superficially shining, and slightly transparent, pin-head-sized tubercles of rounded contour. Alibert also speaks of smooth, externally polished, small tubercles of a brownish tint, spongy in texture, and exuding a reddish fluid; the latter was, however, pathological, as it stained the linen and concreted in crusts over the lesions. Biett, in the *Dictionnaire de Médecine*, states that he had seen two cases in which the tumours were hard and consistent, and contained neither atheromatous matter nor liquid. Cazenave and Schedel describe small pea-sized tumours filled with a dense fibrous substance.

It remains to be added that in those sections of the small tumour made by me, as has been explained, which were not so mutilated as to render the structure indistinguishable, it was clear that the body was composed largely of proliferating rete bodies and connective tissue, with an empty vacuole or space visible in the upper portion of the corium, which seemed to connect with certain irregularly branching channels. It was noticeable that this empty space of definite contour was so cleanly divided, that a portion of it was visible in each of two sections which were formerly in apposition. Whatever might be the significance of these facts, there was certainly nothing here to suggest the transformation of the sebaceous glands, which are readily recognised in sections made of molluscous tumours.

Thinking to secure further information upon this subject, I addressed a letter to Professor Kaposi in Vienna, enclosing a photograph of the patient, and a tolerably minute description of the features of this case translated into the German language, with a sketch of the microscopical appearance described above, asking him for his opinion respecting a diagnosis, and inquiring especially with regard to the lesions designated by him as lymphangiomata, whether they give exit to a bloody or chylous fluid when punctured. To this I had the pleasure of receiving a letter in response, of which the following is a free translation:—

VIENNA, *3d April* 1879.

MY RESPECTED COLLEAGUE,—It is always a difficult task to pronounce upon a case of skin disease when one has not had the opportunity of enjoying the advantage afforded by ocular inspection. My opinion, therefore, in your case can have but a relative value, and should be given only with the necessary reserve. Nevertheless your description of your case is, it seems to me, sufficiently clear, and suggest the molluscum verrucosum described by me (*vide Vierteljahresschrift f. Derm. u. Syphilis,* 1877, 3 hft., p. 333). Endeavour to squeeze out the contents of some of the larger lesions, or to spread over them for a few days a piece of flannel thickly smeared with sapo viridis, then they will exfoliate. In no way does your case, as described, seem to me to correspond with the lymphangioma tuberosum multiplex observed by me (*vide* "Hebra, Kaposi," *Sydenham Soc. Trans.*, vol. iii. p. 387). But, as I have said, all this has only a relative value. You have my permission to publish this letter in connexion with your paper, if you feel so disposed, or to ignore it altogether, if it should be desired. My reason for thus stating my views is the result of comparing the description given by you with the facts and opinions quoted above.

I take this opportunity of renewing the assurances of my professional esteem.—Yours very sincerely,

(Signed) Prof. KAPOSI.

No response is here made to the inquiry respecting the character of the fluid obtained by puncture from the lymphangiomatous lesions described by the author; and it should be added that his suggestions as to the experiment with sapo viridis were impracticable, as they were received only after the lesions in my patient had practically disappeared. By consulting the article to which Kaposi refers in his letter entitled "On the so-called Molluscum Contagiosum," it will be seen that he arrives at the following conclusions:—1. The contagiousness of the so-called molluscum contagiosum has not yet been proved, and he does not believe that it exists. The name should be stricken from our nomenclature. 2. The so-called molluscum contagiosum of Bateman, and that of recent writers, belong to the sebaceous system, and are anatomically equivalent; that of Bateman belonging to the sebaceous gland, the other form to the common opening of the sebaceous and lanugo hair-follicle in the beginning, and later to the gland lobules also. He therefore, for the latter reason, suggests that the name molluscum sebaceum, adopted by Hebra, should be employed in designating both forms. 3. He also says that although both forms often occur together, still they may preponderate, or exist exclusively, in one or the other form, so that he prefers to call that of Bateman molluscum atheromatosum, and the pock or wart-like form molluscum verrucosum. He regards the peculiar large bodies found within them as epidermal cells with modified protoplasm, and states that the same cells are found in other growths.

I do not hesitate, in view of the eminent authority of Professor Kaposi, and of the expression of his opinion, based upon a careful description of this case and a photograph of its lesions, to accept his conclusions as to its character though they be accompanied by a just reserve. As to the name which is employed by him to designate this and similar cases, though it has not yet appeared in the accepted nomenclatures, it has already passed from the field of transient literature to the pages of the dermatological text-books (*vide Die Hautkrankhauten für Aerzte und Studirende*, von Dr Gustav Behrend, etc., Braunschweig, pp. 93 and 287, 1879). It is a term which sufficiently suggests the verrucous features of the disorder, and does not necessarily connect these with a disease of the sebaceous glands,—a distinction which we may say in passing would not be accepted by the author who proposed it.

Possibly in making use of the term molluscum verrucosum, an idea is conveyed as to the nature of an eruption, of precision sufficient to preclude the need of establishing a differential diagnosis between molluscum and verruca; but however precise our terms, we must admit that the two forms of disease approach each other, on one side at least, to such an extent that no perfectly distinct line of demarcation can be drawn between the atypical varieties of each. Thus, by Walter the soft warts are called nævus di molluscıformis; and Hebra, under the title of keratoses with disease of the papillæ, considers the molluscum contagiosum of Bateman, though he is careful to point out the difference between them (*Diseases of the Skin*, *op. cit.*, vol. iii. p. 46).

Of the different kinds of warts, that which is known as the pointed wart (*spitzen warzen*) is seen to resemble in several features the lesions I have described above. But with reference to this question Hebra states that their spontaneous involution cannot be expected, and that he had known of no case in which there had been spontaneous atrophy and disappearance.

The pathology of several kinds of warts is that, however, which would well explain many of the symptoms now under consideration, for we find that their structure is largely composed of connective tissue containing blood-vascular loops covered with a more or less dense, and in some instances semi-transparent, epidermic layer. In their colour, shape, and other external peculiarities, they for these reasons exhibit a remarkable variability. The pointed wart, however, occurs most frequently in the genital region, a portion of the body not invaded by the eruption now under discussion, and one in which the verrucous growths acquire the features peculiar to what is best recognised among Americans as the condyloma.

The foregoing facts seem to me to afford a justification for using the term verruca in describing the mollusciform bodies observed in the present case, while they would scarcely warrant a designation by such a term exclusively. It is, therefore, to the title molluscum verrucosum that we must look for a name which shall properly describe a disease whose lesions exhibit certain of the features of the two disorders which that name recalls.

In this connexion we can dismiss a discussion of the distinction between molluscum fibrosum and molluscum sebaceum, since that distinction is now accepted by most dermatologists. Nor need we dwell upon the *quæstio vexata* of the contagiousness of the last-named disease. We are here confronted with a third problem whose solution has interested especially the later investigators, viz., Are the varieties of molluscum which obviously differ from the contagious form first described by Bateman diseases of the sebaceous glands?

To this question Kaposi returns, as we have seen, a decided and affirmative answer. As opposed to his view, however, we find Professors Boeck (*Uber Moll. Contagiosum und die So-Genannten Molluscumkörper, Vierteljahr. f. Derm. u. Syph.*, 1875, p. 23) and Simon (*Uber Molluscum Contagios, Vierteljahr f. Derm. u. Syph*, J. iii., 1870, p. 400), who believe that the bodies under discussion are not connected with the sebaceous glands or the hair follicles, but originate in hyperplasia of the rete cells. Virchow, making use of the term epithelioma molluscum, conclude that they arise from disturbance of the hair follicle. Lukomsky, furthermore, regards the disease as one affecting the Malpighian layer, and having no connexion with the sebaceous glands. "At first," he remarks, "the Malpighian projections grow rapidly, and the papillæ contain almost exclusively bloodvessels. The peripheral projections are lined with cylindrical epithelium; then appear two or three layers of cells of the mucosum, peculiar for their large size. Centrally are large granular cells which, as they advance upward, pass into molluscum bodies. In a later stage the vegetations grow still larger, their contents can be expressed, and we have left the little conical tumours. The molluscum bodies come from cells which lie in the mucous layer, not from Malpighian cells themselves, but from wandering cells, which are always present in this layer."

According to Retzius, Bizzorero, Manfredi, Lostorfer, and others, the epithelial cells in abundant proliferation press against the bases of the adjacent papillæ, and thus cause them to diverge, while by the same process their apices are made to approximate. Thus a quasi-nidus is formed, in which the molluscum bodies develop. But here Kaposi points to the well-known fact, that in the lanugo-follicle, which, according to him, is the site of the eruption, the orifice of the sebaceous duct and that of the hair-follicle open by a common mouth immediately upon the outer surface of the skin, and thus the rete for a short distance lines the common duct, forming the outer root-sheath of the lanugo. This explains the rete cells seen by Lukomsky; and as to the explanation of Retzius, if it were correct, the lobules of the molluscum bodies would be separated by papillæ and not by septa. Retzius, however, accounts for the absence of papillæ by the supposition that they have undergone atrophy as a result of the pressure, to which Kaposi rejoins that in these cases sufficient time for the production of such atrophy has not elapsed.

Still the explanation of Lukomsky has an especial interest, in view of the characteristics of the case described by me. In it the entire absence of a central orificium, of milky, curdy, or lobulated contents; the escape of blood after puncture, presumably from the papillæ filled with bloodvessels; and the waxy-whitish apex of each lesion, in consequence of the pressure upon the stratum corneum of the underlying rete cells;—all these circumstances would seem to point to a confirmation of the opinions expressed by him.

The whole problem, however, is one which remains to be solved by further clinical and microscopical investigation. In view of all that precedes, I think we are, therefore, merely justified in accepting the following conclusions:—1. The case here described is one exhibiting certain rare and peculiar features, and cannot therefore be made to serve as a basis for generalization. It is merely a contribution to the literature of the subject. 2. Considering it, nevertheless, in connexion with certain other cases, especially those described by Mr Hutchinson of London, it would seem to be reasonable to admit that there is a variety of molluscum whose characteristics differ in a marked degree from those first observed by Bateman, and since studied by later investigators. These characteristics are, briefly, an extraordinary multiplicity of small, pointed, white capped, more or less solid lesions, resembling vesicles in their external appearance, generally destitute of fluid or milky contents, often without a central depressed orifice, and at times intermingled with other lesions whose characteristics point unmistakably to the sebaceous origin of the disease. 3. To the objection possibly brought against the conclusion last stated, that the lesions in question are merely incomplete and undeveloped forms of molluscum bodies, it may be responded that in the case here described there were several recurrences of the disease, none influenced by either internal or external treatment, each accompanied by an abundant and copious development of the eruption under circumstances particularly favourable to the growth of typical mollusca. 4. The term molluscum verrucosum, proposed by Kaposi, properly designates the clinical features of the lesions to which the name has been limited in this sketch, and, in any view, is useful in distinguishing all the wart-like varieties of molluscum sebaceum from those typical lesions to which the title of contagiosum was formerly applied. 5. As between those authors who hold that even the atypical or wart-like forms of molluscum originate in disorders of the sebaceous glands and the authors who oppose this view, the case here described would point to an origin from the rete bodies by proliferation, rather than to a disorder originating primarily in the sebaceous glands.

## ARTICLE IV.—*Epilepsy, Vertigo, and Ear Disease.* By P. M'BRIDE, M.B., and ALEX. JAMES, M.D.

TRUE epilepsy or epileptiform attacks have occasionally been observed in connexion with many lesions of the ear, but that form of ear disease which is most likely to be accompanied by epilepsy is undoubtedly chronic suppuration of the middle ear, or otorrhœa. Through the kindness of Professor Maclagan I had the opportunity of seeing and treating the following case:—

David H. (æt. 27) complained of giddiness (or dizziness, as he expressed it) and fits. Three years ago he was suddenly deprived of consciousness, and on recovering he found his face cut. The attack not having occurred at his own home no further information about it was obtainable. On the afternoon of the same day a second fit took place; it lasted about fifteen minutes, and was attended by convulsive movements of the arms.

From that time he has been suffering from epileptic attacks at intervals varying from a fortnight to three months. At the time the case was entered in the Infirmary books the patient did not mention any premonitory symptom, but he has since stated that the true fits (*haut mal*) are always preceded by a pain over the left eye and a buzzing sound in his head. The fits had been increasing in frequency before he entered the Infirmary.

About a week after the first fit the patient had his first attack of dizziness, which seems to have been a kind of *petit mal* or momentary loss of consciousness. Such attacks he has frequently had since the occurrence of the first.

The patient volunteered the statement that when he was any length of time (a week or so) without a dizziness he was sure to have a fit, and he also thought that a dizziness occurring before a fit broke its strength. By questioning him further, it was discovered that by the term dizziness he meant one of two conditions: either (1), an attack of vertigo without loss of consciousness; or (2), a form of *petit mal*, during which he muttered incoherently but could not understand what was said to him. From his applying the same name to both conditions it is evident that he considered the lapse of consciousness as simply a more than usually severe vertigo. The simple vertigo he called "slight giddiness," and the *petit mal* severe giddiness. The patient had an offensive discharge from his right ear, which dated from an attack of measles which he had at the age of one year. Dr Maclagan ordered him bromide of potassium, which was continued as long as he was under treatment, with the exception of a few days' intermission *experimentæ causa.*

The aural examination revealed considerable deafness on the right side, the tick of a watch (normally heard at 30 inches) being only distinguishable at one and a half. Examination by the speculum and reflected light, assisted by the probe, revealed a large polypus situated deep in the meatus, and having its attachment above. Auscultation during inflation by Politzer's method showed that the tympanic membrane was perforated. The polypus was removed by means of a Wilde's snare. The mucous membrane of the tympanum then came into view. It was enormously swollen and granular, and prevented the accurate diagnosis of the position of parts. To the pedicle of the polypus for a week or two a saturated solution of perchloride of iron in glycerin was applied daily by means of cotton wool twisted round a probe. For the inflamed mucous lining of the tympanum various astringents were used (such as perchloride of iron, sulphate of zinc, nitrate of silver, 40 grs. to the ounce). Under this treatment the swollen and granular surface became more healthy looking, the discharge of pus diminished, and by the speculum the condition of parts was found to be as follows:—Below the short process of the malleus the tympanic membrane was quite gone, and the still congested mucous lining of the tympanum was visible. The handle of the malleus was complete, and its lower part was drawn inwards by the action of the tensor tympani so as to rest on the promontory. The discharge of pus never quite ceased, but was reduced to a minimum all the time the patient was under treatment.

In order to discover to what extent the fits were influenced by the condition of the ear, on one occasion when the latter seemed at its best the administration of the bromide was stopped. This was followed by the immediate recurrence of the fits (*haut mal*), one occurring daily till the medicine was resumed. The drug had also a beneficial influence on the giddiness. One curious fact, however, in connexion with the improvement in the ear was this, that while the patient was at first morbidly irritable, peevish, and very sensitive to pain, he was while the mucous lining of the tympanum was in a comparatively healthy condition (of a pale rose colour and not granular) sensible and intelligent. At his last visit, however, to the Dispensary he was again very stupid looking and hyperæsthetic, so much so that he was suspected of being drunk. The patient's statements and the absence of any alcoholic odour negatived this idea. On examining the right ear the mucous membrane was found to have returned to its granular condition, and to be secreting freely.

It must be remembered that during the whole time he had been taking the bromide of potassium, so that appearances seem in favour of his mental condition varying to a considerable extent with the state of the ear.

So much for the general outlines of the case, let us now look at some of its features more in detail.

1. *The Nature of the Vertigo.*—It was found after close questioning that the vertigo was always in the same direction, viz., that surrounding objects seemed to move from left to right, never appearing to rise up or fall away.

Now this is the form of vertigo we can produce in ourselves by rotating in the vertical position from right to left, *i.e.*, with the planes of the two horizontal semicircular canals at right angles to the axis of rotation, and with the ampulla of the right horizontal canal first. According to recent authorities, by this means we produce an increase of pressure in this ampulla, and we irritate the filaments of the auditory nerve distributed to it. If, on the other hand, we rotate with the head bent forwards and turned on one side, so that a line drawn from the mastoid process of one side to the opposite eye will fall perpendicular to the floor, we produce (according to the direction of rotation) a vertigo of such a kind that surrounding objects either seem to rise up towards or fall away from us. Here we irritate the superior canal of one side or the posterior canal of the opposite side, according to the direction of rotation—the two being antagonistic, as pointed out by Crum Brown. From these facts we are justified in assuming that the patient whose case we are considering has a morbid condition of the right horizontal semicircular canal. It is probable that this morbid condition is either a congestion or the result of a congestion.[1] Politzer (*Lehrbuch der Ohrenheilkunde*) has pointed out that there is a direct anastomosis between the vessels of the tympanum and those of the labyrinth, and of all the canals the horizontal lies nearest to the tympanum, and would, consequently, be more likely to be influenced by its condition.

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[1] Caries, we think, may be excluded.

2. In walking the patient states that he often staggers to the right (the affected side). This symptom is probably due to an abnormal irritability of the ampullary nerves at one part of their course. In another patient, also a sufferer from suppuration of the middle ear, a rapid turn of the head from the affected to the healthy side produced a tendency to fall.

3. The epileptic, whose case we are considering, stated that often, when sitting quite still, his head would fall over to the affected side. This symptom, again, appears to be the result of a chronic irritation of the ampullary nerves.

That in the above case the ear was the exciting cause of the epilepsy, seems probable for several reasons.

(*a.*) The patient lived a sober and well-conducted life, and the epilepsy had not made its appearance till he was twenty-four years of age—a rather late period for idiopathic epilepsy to commence. His family history also was good.

(*b.*) The relation of the vertigo to the epilepsy was very distinct, and the facts of the frequently repeated attacks of giddiness warding off a fit is just what one would expect if they were due to different degrees of the same irritation. That the vertigo is due to the lesion of the ear will not, we think, be disputed by any one conversant with the symptomatology of aural affections.

(*c.*) The fact of both the epilepsy and vertigo being relieved by the bromide of potassium points to a certain connexion between the two. How these beneficial results occur it is impossible to say; but when we remember the congested condition of the vessels of the labyrinth which probably exists in this case, and the powerful influence exerted by this drug on the vaso-motor system, a possible explanation suggests itself. Let us now turn to the consideration of the nervous channel by which we may suppose the epileptic fits, vertigo, etc., to be produced. Our impression is, that owing to the chronic irritation of the nerve terminations in the ampulla, there is brought about a condition of "unstable equilibrium" in the nerve centres. Why the effects of such a condition should manifest themselves at one time by a vertigo with or without loss of consciousness, and at another by a true epileptic convulsion, may be explained either by supposing that the effects of peripheral irritation are cumulative (vertigo due to a small, and an epileptic attack due to a large explosion), or that the peripheral irritations which produce such explosions vary in intensity, source, etc.

Having stated our theory, it is now incumbent on us to prove it if possible, by experiment.

Let us first consider the effects of irritating our own ampullary nerves. That we can accomplish this by rotation cannot be doubted, from the similarity of symptoms produced in animals by simply rotating them, and by cutting the semicircular canals. If, then, we turn round and round we produce a vertigo, which, if the rotation be continued, is followed by nausea and finally vomiting. Hence there must be a very close physiological relation between the centre for vertigo (if we may be allowed the term) and the vomiting centre, and, moreover, there is a tendency for an impression to extend from the one to the other.

Cyon has found that section of the semicircular canals produces movements of the eyeballs, and concludes that there is a close physiological relation between the central terminations of the ampullary nerves and the oculo-motor centre. An interesting illustration of what has been stated is furnished by the case of a medical friend. He suffers from a certain amount of acquired strabismus, and states that he can correct it at will, but that in so doing he produces a most disagreeable feeling of vertigo and nausea. Here then, conversely, we have an instance of the passage of an impression from the oculo-motor centre to the centre for nausea and vomiting, and finally to the centre for perception of the impressions which pass from the semicircular canals. Cases, too, are on record, both in this country and in Germany, of ear disease where slight pressure produced nystagmus (see *Archiv für Ohrenheilkunde*, vol. xiii. p. 68).

The effects of stimulation of the ampullary nerve can be well seen in the rabbit. If such an animal be rapidly rotated in the horizontal plane for a period of fifteen or twenty seconds, and then the rotation be suddenly stopped, general convulsive movements will be found to occur. These are, however, of very short duration; they rapidly become more marked in the limbs of one side, and as the animal recovers we have supervening certain so-called "forced movements." The forms which these assume are usually two—rotation on the long axis of the animal's body, and the "manège" movement, the former often merging into the latter. Their direction corresponds to that in which the animal has been rotated,—right to left, or *vice versa*. Nystagmus can always be detected, and with this are associated peculiar jerking movements of the head, both phenomena being best marked as the animal is recovering. Urine is frequently passed during the convulsive stage.[1]

As it is important, however, to show that an epileptiform seizure may be produced by stimulating the auditory nerve in the semicircular canals, it is necessary to be certain that, at anyrate, some of the movements mentioned above are really epileptic in nature, *i.e.*, are due to certain derangements in the medulla or its neighbourhood, whereby vaso-motor spasm is produced and convulsions result.

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[1] That all these symptoms are the result of irritation of the peripheral terminations of the nerve in the semicircular canals, and not of any change (vascular or otherwise) in the nerve centres, is proved by the facts, that similar symptoms can be produced by the pressure of a column of water against the tympanic membrane; and that whilst an animal is being rotated, if the direction be suddenly reversed, the symptoms on ceasing the rotation will be found to be much diminished in intensity.

It may readily be argued, that inasmuch as the forced movements above mentioned are certainly the results of disordered sensory impulses, so the general convulsive movements which occur are due simply to those impulses more intense in character, because occurring immediately on ceasing the rotation. In favour of this view we have the facts that they are clonic in character. They are also short in duration, and they merge insensibly into movements unmistakably "forced" in nature. But more conclusive evidence on this point is obtained if we substitute the guinea-pig for the rabbit, as might be expected when we remember the comparative ease with which such animals can be rendered epileptic. In a young guinea-pig there was noted after rotation, and preceding the occurrence of general convulsive movements, a stage of well-marked tonic spasm. This was at first general, but in a few seconds became limited to the muscles of one side, producing a condition resembling pleurosthotonos. To this succeeded general clonic convulsions, and the subsequent phenomena were similar to those described as occurring in the rabbit. In the first stage the pupils were dilated, afterwards they frequently oscillated, sometimes dilated, and sometimes contracted. In the latter stages nystagmus and the jerking movements of the head could also be observed. We may, therefore, consider ourselves justified in concluding that, by stimulating the nerve-endings in the semicircular canals, the motor effects which result are of two kinds, and are each due to a separate cause—the tonic and clonic convulsions to stimulation of the "convulsive" centre in the medulla, and the "forced" movements to disordered sensory impulses vertiginous in character. These movements will, as might be expected, vary according to the degree of stimulation,—the former, or epileptic, in cases of intense stimulation; the latter, or movements the result of vertigo, when it is comparatively slight in amount.

Further, from the intimate physiological connexion which experiments on animals (if we are right in our interpretation of them) have shown to exist between the co-ordinating or equilibrium centre on the one hand and the convulsive centre on the other, we may conclude that the effects of chronic irritation of the terminations of the auditory nerve in the semicircular canals will be to produce more or less directly a condition of so-called "unstable equilibrium" in the latter centre, as a result of which peripheral irritation, which under normal conditions would be followed by very striking symptoms, will be sufficient to produce a more or less severe convulsive attack.

Let us now, in conclusion, turn to the causes which may produce irritation of the nerve-endings in the semicircular canals. The idea is, we believe, rather prevalent, that where we have paroxysms, or even constant vertigo, and perhaps other nervous phenomena, with coincident deafness, we are entitled to diagnose Menière's disease.

Now, by Menière's disease is generally meant organic disease of the labyrinth. No one is entitled to make such a diagnosis unless the tuning-fork test points to a lesion of the internal ear. But even if the tuning-fork be applied to the middle line of the head or teeth, and its sound be not heard best in the affected (deaf) ear, are we entitled to diagnose organic labyrinthine mischief? We think not always. Troeltsch (*Ohrenheilkunde*, p. 259) points out that increased intra-labyrinthine pressure may cause diminished hearing of the tuning-fork on the affected side, and that after the age of fifty perception of sounds by bone conduction is often impaired.

Now, increased intra-labyrinthine pressure may arise from a variety of causes, and is most likely to produce vertigo, and possibly, as we have seen, may simulate organic lesions of the labyrinth. We may then tabulate diseases of the ear which are likely to produce vertigo as follows:—

1. Organic lesions of the semicircular canals, and probably congestion caused by acute inflammations in the tympanum.

2. Anything which causes inward pressure of the stapes.

(*a.*) Any foreign body (cerumen, etc.) pressing on the tympanic membrane, which again forces inwards the chain of ossicles, including the stapes. Pressure on the stapes is conveyed to the intra-labyrinthine fluid, and increases its tension (see Von Troeltsch, *Ohrenheilkunde*, p. 88).

(*b.*) Chronic or acute catarrh of the tympanum and Eustachian tube may produce similar results, either through indrawing of the drumhead, or through the pressure of fluid poured out into the tympanum (see Roosa, *Diseases of the Ear*, p. 264). Gruber (*Lehrbuch der Ohrenheilkunde*, p. 392) states that intense vertigo is sometimes produced by the presence of a perforation in the tympanic membrane. In a case of this kind observed by him the vertigo only existed as long as the meatus was open, but ceased when a plug of cotton wool was inserted.

While writing on this subject, it may not be amiss to mention that a person may be deaf in one ear without knowing it, and indeed that the hearing of both ears may often be considerably impaired, and still the patient be unaware of the fact. This point can, of course, easily be determined by the use of a watch, and comparing the result with that found in individuals having perfect hearing. A patient may then complain of tinnitus and vertigo only, and the symptoms be caused by a purely physical and easily remediable condition of the external or middle ear. Whenever, then, a patient complains of tinnitus or vertigo (even though no mention be made of any diminution in the hearing power), the possible existence of a cause in the external or middle ear should be borne in mind.

## ARTICLE V.—*The Causation of some Primitive Face Cases.* By J. HALLIDAY CROOM, M.B., F.R.C.S.E., Physician Royal Maternity Hospital; Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinburgh.

(*Read before the Obstetrical Society of Edinburgh*, 10*th December* 1879.)

IT is seldom in private practice that the physician has an opportunity of observing the pregnant woman for some weeks before delivery, and noting the changes which take place during the period immediately preceding parturition. Even in the Maternity Hospital such observations are not very easily carried out, because the majority of women present themselves at our lying-in institution either actually in labour or when the process is just imminent. Yet changes in the presentation of the fœtus are by no means uncommon—changes, for example, from the transverse to the cranial. In the position, however, especially from one cranial position to another, changes are not only not uncommon, but frequent. Now that external palpation has become more thorough, and is practised as routine by every obstetrician, along with the aid afforded by auscultation, these changes can be made out with great accuracy. In the case which I am desirous of bringing under observation, the changes from one presentation to another—viz., from cranial to face, and *vice versa*—were frequent. It is, however, specially with the view of illustrating one probable causation of a certain class of face cases that I offer the following remarks:—

Face cases may be either primitive or secondary. Although this classification is not adopted by many authors, yet the arrangement is a convenient one, for it differentiates two sets of face cases occurring under two very different sets of circumstances. It is necessary, therefore, clearly to define each variety.

The ordinary or secondary set of face cases which are described fully in every treatise on midwifery, and with which every obstetrician is familiar, may be defined as those where the face is found presenting during labour, and is brought about as a result of it. The causation of such face cases has been fully inquired into. Daventer, Baudelocque, Duncan, though differing considerably in detail, refer the cause to some fault in the powers of parturition, viz., uterine obliquity. Hecker finds the cause in the body passing, viz., in a lengthening of the posterior arm of the cranial lever in dolico-cephalic children; while, according to others, the bony passages are at fault, and the occiput hitching on the brim of a narrow pelvis is the cause. With this set of face cases the present communication is in no way concerned.

The other set of face cases are those which are termed primitive or primary, viz., those cases in which the face presents during pregnancy, before the commencement of labour; when, therefore the head is above the brim, free from contact with the bony pelvis and the membranes unruptured. Such cases, however remarkable they may seem, and however difficult of explanation, are yet distinctly recognised by many, indeed by most authors. Madame Lachapelle records two cases where post-mortem examinations of women near full term showed the fœtus presenting by the face. The authors of the *Dictionnaire de Médecine* collected eighty-five cases, forty-nine of which were clearly made out and announced as such before rupture of the membranes. Further, of these eighty-five cases there were only three in which the uterus was in a state of well-marked obliquity, and only one where the amnionic fluid was in excess. From this evidence, as well as from other causes, which, however, he does not mention, Cazeau comes to the conclusion that the majority are primitive, and due to causes altogether beyond our knowledge. Tyler Smith makes no special reference to this class of face cases, but refers the causation of all face cases to causes intrinsic or extrinsic to the fœtus. Hodge objects to the division of face cases into primitive and secondary as an unnecessary classification. He admits that full presentations of the face are often primitive, and attributes them to spontaneous movements of the child, the face getting so fixed by uterine contraction. Sir James Simpson accounts for face cases and malpresentation generally—1st, by death of fœtus; 2d, premature labour; 3d, the application of unusual excito-motor stimuli to the fœtus and uterus; 4th, causes mechanically displacing fœtus during pregnancy or commencement of labour; *e.g.*—*a*, excess of liquor amnii; *b*, sudden rupture of membranes. Schroeder says, "In primiparæ in whom during pregnancy already distinct uterine contractions have taken place, they may be produced during that period—primary face cases." It would seem that Schroeder overlooks the fact that in primiparæ at term the head is lower than in multiparæ, and that the causes at work in producing secondary cases will come into play here as well. Playfair accounts for primitive cases as the result of the well-known labour pains which continue marked before labour sets in. Spiegelberg refers incidentally to primitive, and records the fact that he has seen a primitive face case caused by bulging of the thorax in hydrothorax. Matthews Duncan, in a paper read before this Society in April 1870 on the production of presentations of the face, confines his attention entirely to the secondary or ordinary face cases. Referring to primary cases, he says, "As has been already hinted at, all cases of face presentation do not demand this kind of explanation. Instances are recorded, for example, where the extreme extension of the head existing in an ordinary face case during labour has been observed before labour commenced." To this extraordinary kind of face presentation, and others allied to it, Dr Duncan makes no reference whatever, confining himself entirely to the mechanism of the production of face presentation under ordinary circumstances.

The following is a good example of a primary face case, and at the same time affords an explanation of the cause of its occurrence :—

Margaret Walker, aged 30, a multiparous woman, pregnant of her third child, was admitted to the Maternity Hospital on the 26th of September 1879.

*On examination externally.*—There is considerable right uterine obliquity. The globe of the head can be felt above the brim. With the fingers and thumb grasping the abdominal wall just above pubes, the head can be felt high up above bony ring, freely movable. Back of child is directed towards the right. Small fœtal parts can be felt towards left side, near fundus. Greatest intensity of fœtal heart on right side.

*Internal examination.*—Cervix shortened ; os externum gaping ; os internum easily admits forefinger ; membranes unruptured ; anterior fontanelle distinctly felt. Position, right occipito-posterior well extended.

*27th Sept.*—The full face felt, nose, orbits, chin ; left mento-anterior.

*28th Sept.*—Full face felt as before ; no uterine contractions are distinguishable. At the patient's urgent request she was allowed to go home for a day or two. She returned on 12th October. External examination as on 16th Sept. Internal examination—presentation, cranial position, a well extended right occipito-posterior. The anterior fontanelle is easily felt, but the apex of occipital bone can only be recognised with difficulty to the right, posteriorly and high up.

13th *Oct.*—The presentation is a full face, high up, freely movable, not in contact with bony pelvis. Slight hardening of the uterus under the hand externally can occasionally be felt, but this does not in any way affect position.

*14th Oct.*—During visit, position right occipito-posterior.

*Vesper.*—Full face presented, without any uterine contraction being felt by patient or recognised by hand.

*15th and 16th Oct.*—Face as before.

*16th Oct.*, 10 P.M.—Still a face.

*17th Oct.*, 2 A.M.—Strong uterine contraction set in. On examination the face was found presenting ; after a short interval the position was altered to a right occipito-posterior.

At 3 A.M.—The posterior fontanelle came within easy range of the examining finger. The head threatened to remain persistent right occipito-posterior, but when well down on the floor of the pelvis the forward rotation of the head took place. There was a very moderate quantity of liquor amnii.

Duration of labour—1st stage, 6 hours ; 2d stage, 1 hour 57 minutes ; 3d stage, 13 minutes.

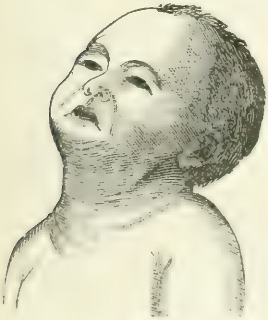
Now, this was without doubt a primitive face case, and the question comes to be, How is a presentation such as this of the full face at the brim during pregnancy to be accounted for? I confess that I can hardly conceive of any presentation more difficult to explain. The natural attitude of the child, it is important to remark, is essentially one of flexion—every limb, every finger, the trunk, in fact, every movable member, is flexed. In a primitive face case, such as the one we are now considering, we have the normal flexion replaced by extension to an extreme degree. Further, we have to consider the fact that the fœtus was alive, moving freely in a fluid medium, uninfluenced either by labour or contact with the pelvis.

The uterine contractions which go on through the later weeks of pregnancy, and which Schroeder, Hodge, Playfair, and others allege is the cause of this class of face, does not account for this particular case. For, as I have shown in reading the case, the effect of the first real uterine contraction was to convert the already existing face into a right occipito-posterior. Further, I showed, when making an examination some days before labour, and when the uterus could be felt hardening under the hand, the position remained unaltered. If the patient had been, as Schroeder suggests, a primipara, in whom the lower uterine segment is deep in the pelvis, and the head more or less affected by the hard pelvis, in all probability the uterine contractions preceding actual labour would have influenced the head; but this patient was a multipara.

The right uterine obliquity, by causing the back and occiput to gravitate to the right and posteriorly, had some influence in causing the right occipito-posterior position, but it is difficult to see how any ordinary amount of obliquity would cause a full face to present at the brim irrespective of labour, and while the head remained free of the pelvis. I do not here call in question the effect of obliquity in producing a face case after labour has actually set in, but I fail to see how it is applicable in the present case. It is needless to discuss the effects of the liquor amnii, because neither hydramnios nor premature rupture of the membranes were factors in the case, as neither condition existed. For the same reason, such causes as premature labour, death of fœtus, and the like, are inapplicable; and, indeed, Sir James Simpson and Dr Fleetwood Churchill do not specially particularize them as applicable to primitive face cases, though they no doubt include such cases. Undoubtedly, when such conditions are present the production of the presentation in question is more readily understood.

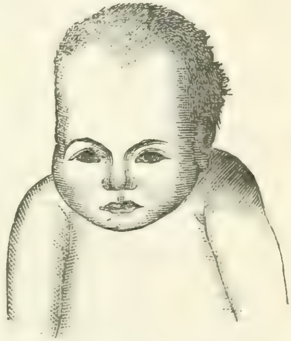
The explanation of *this* case, at least, is to be found in the fœtus itself. Both Sir James Simpson and Dr Hodge refer in general terms to the movements of the fœtus, Simpson speaking of the application of unusual excito-motory stimuli, and Hodge of the spontaneous movements of the fœtus. In this case the fœtus was a well-developed female. There was no marked caput succedaneum. The measurements of the head were sufficiently near the average to require no particular notice. There was no enlargement of the thyroid gland, spina bifida, nor any sore nor mark of any kind on the child. The striking point about the child was the extreme extension of the head. The muscles of the back of the neck were strongly contracted, the occiput drawn backwards, and the chin well extended from the chest. Indeed, the face, when the child was held in the ordinary position, looked almost directly upwards. On inverting the child, the head maintained the same degree of extension, the face looking directly downwards. During sleep and periods of entire quiescence, the extension, though less pronounced, was still well marked. Throughout the patient's stay in hospital, a period of ten days, the child continued to carry its head in the same extended position. On the eleventh and twelfth days post partum the extension was somewhat less decided, but a month after labour, when the child was last seen, the position of the head was one of marked extension.

The accompanying diagram—or rather portrait, for it is from life —shows the appearance of the child about twelve days after birth



Appearance of child twelve days post partum. Head well extended.

Compared with



An ordinary left Occipito-anterior Case, twelve days post partum, held in the same position. Head well flexed.

The other illustration is that of a child, also twelve days after labour, born after a natural labour, in a left occipito-anterior position. Both children were held in the same position, and the difference in the position of the respective heads is sufficiently obvious. Any one who has paid any attention to the attitude of the new-born child must be aware that when held on the knee, for example, with one hand supporting the back, the position of the head is one of flexion. In the child in question, as the illustration shows, it was one of extension. This was clearly not the consequence of labour, because the result of labour was to convert the face into a right occipito-posterior, and so bring about flexion. Neither was the extension the result of any influence after labour, nor was it, as I have endeavoured to show, the result of any contractions or deflection of the uterus before labour; therefore the production of this primary face case depended on some cause intrinsic to the fœtus itself. That cause was a tonic contraction of the muscles of the back of the neck, with an atonic condition of the depressor muscles of the chin. The frequent change from face to occipito-posterior and *vice versa* were owing entirely to fœtal movements, the head being more flexed during periods of quiescence, and extended when the fœtus was in motion. It is more than probable that the bulk of primary face cases depend on some abnormality such as the one just described.

## ARTICLE VI.—*Case of Diphtheria Complicating Pregnancy.* By Dr CHARLES E. UNDERHILL.

(*Read before the Obstetrical Society of Edinburgh, 26th November* 1879.)

THE following case occurred in the practice of Dr Matthews Duncan; but as I had an opportunity of watching it a great deal, and as it presents some points of interest, I have thought it worth while to read it to the Society.

Mrs T., aged 27, was in the ninth month of her third pregnancy, and up to that time had enjoyed good health. On 7th March 1876 she felt her throat a little sore, but was well enough to go out to dinner. On the following day I saw her for the first time. The tonsils were swollen, and there were some small, shreddy, whitish patches upon them. I did not then anticipate diphtheria, and cauterized lightly both tonsils.

*9th.*—The patches were thicker, more coherent, and of greater extent; there was also an ugly-looking prolongation of one of the patches down the pharynx. The uvula was somewhat swollen, and presented a small yellow patch at its extremity. A gargle of chlorine water was ordered, together with large doses of iron and chlorate of potash. The general health and strength had, up to this time, been but little affected. The morning pulse and temperature were normal.

*10th.*—The uvula was now covered with thick, tough membrane, the tonsils were more swollen, and the deposit on the tonsils and palate was spreading. The voice began to be slightly husky.

*11th.*—The voice was worse. Much pain was complained of particularly on swallowing. The patient had had a sleepless night. The throat was at this time very characteristic; the thick, yellow, leathery patches surrounded by the reddened margin of swollen tissue, the foul-smelling breath, and the increasing depression, gave cause for much anxiety.

*12th.*—Last evening and this morning the voice was somewhat better, the other symptoms remaining unaltered. The voice became worse again, and indeed was quite lost in the evening.

*13th.*—The patches are extending and the voice reduced to a whisper, but the breathing remains little affected.

*14th.*—The voice was now hoarse and whispering, and during the day the breathing began to be somewhat laboured and noisy, but not to such an extent as to give rise to serious distress. There was, so far, no duskiness of face or impairment of mental energy. She remained throughout calm and courageous, taking a good deal of nourishment and wine.

At 11 A.M. she was seen by Dr Grainger Stewart in consultation, and a spray of Condy was ordered in addition to the remedies previously used. During the day her condition changed rapidly for the worse.

At 11 P.M. I went to stay in the house during the night, she was so ill; the voice quite gone, the breathing hoarse and laboured, and the general condition very unfavourable. Towards morning the lips and nails began to assume a bluish appearance, and the head, which had been previously quite clear, became affected, drowsiness and stupidity becoming increasingly manifest. At 7 A.M. I sent for Dr Duncan and Dr Watson, the latter of whom performed tracheotomy.

*15th,* 7.30 A.M.—The patient was seated on a chair opposite the light, and behaved most admirably during the operation. There was a good deal of bleeding from the deeply congested vessels of the neck, but neither this nor the free opening into the trachea produced much effect upon the duskiness of the face and neck, or gave any marked relief to the dyspnœa. Finding this to be the case, Dr Watson passed his forefinger down the trachea, and succeeded in hooking up a large piece of false membrane. This was a remarkably fine and complete cast of the trachea, bronchi, and smaller bronchial tubes, extending to tubes of the third or fourth magnitude. It had the appearance of a mass of membrane as large as the index finger, dividing into two smaller parts, one of which was considerably narrower than the other, these again branching into smaller divisions. It was pulled up into the wound with the finger, and then removed by forceps. Had it not been for the removal of this cast, I do not think the patient would have survived more than one or two hours. As it was, the breathing was much relieved by the operation, and though in a very feeble and exhausted state for about two hours, she afterwards rallied considerably and regained her usual calm cheerfulness.

Up to this time the fact of the patient's pregnancy had not in any way altered the general features of the case. It was agreed that I should remain in the house, and, in the event of her dying undelivered, should make an effort to save the child by immediate Cæsarean section. This painful duty was rendered unnecessary by the further progress of the case.

While the operation was being performed she had felt the first slight labour pains, and about 10.30 A.M. she let me know that labour was coming on. The uterus could be felt contracting regularly, though the pains appeared to cause no suffering. At 11.30 the membranes were filling the vagina, with the os fully dilated. I ruptured the membranes, and the head, in the first vertex position, followed very quickly. There was very little blood lost; the uterus contracted firmly, and the patient seemed much relieved by the labour. She breathed more easily, took more milk and beef-tea, and was very decidedly better. The child was living and healthy, though small. Her pulse at the time was 140, the respirations 27 per minute all day. Her urine had been examined several times, and was always found free from albumen. During the day she had expectorated through the tube a large quantity of shreds of membrane, having a dendriform appearance when floated on water, and evidently coming from, and being casts of, the more minute bronchial tubes.

10 P.M.—Pulse 140, temperature 103°, respirations 27. When Dr Duncan saw her in the evening she was better, quite sprightly and cheerful. The uterus was very firmly contracted. The blueness had disappeared entirely from her nails, and to a great extent from the lips and face. She sat up quite bright in bed, but slept directly she lay down again. A catheter was passed, but little or no urine was found in the bladder, though none had been made since the delivery.

16*th*.—She passed a restless night, and vomited a little in the early morning. She remained, however, cheerful and not materially weaker until about 8.30 A.M., when she began to fail, and rapidly passed into a state of collapse, dying quietly an hour later.

*Remarks*.—Considered simply as a case of diphtheria, this case calls for few remarks. The disease ran its ordinary course. The symptoms at first were slight, and the appearance of the throat when first seen was not at all characteristic. There was no exact record kept of the pulse and temperature, but until the end was approaching they were not high. The larynx became affected, as shown by the alteration in the voice, on the third day of the disease; but it was not until four days later that the respiration became markedly impaired, which rendered it probable that the dyspnœa was due more to the gradual narrowing of the whole bronchial tract than to occlusion of the larynx alone. This was shown to be the case at the operation, when the mere opening of the windpipe was followed by little if any improvement; and it was not until the large cast was removed, and a quantity of smaller dendriform masses of false membrane were got rid of, that any relief was obtained. This rendered the prognosis after the operation quite hopeless, though the amount of temporary improvement was astonishing. The end came, as it so often does in diphtheria, very suddenly. The absence of albumen, on the several occasions on which we examined the urine, was unusual, for though not at all a constant phenomenon in diphtheria, it is usually found at some period of the case. After delivery the urine was suppressed, none being passed or secreted for the first twelve hours, and I have no record of any being passed in the ten remaining hours of life.

Of the treatment adopted little need be said. The cauterization on the first day was a mistake due to imperfect diagnosis. Subsequently, the free administration of iron and hydrochloric acid and stimulants, with the frequent local application of a strong chlorine solution, were the remedies most relied on

As regards the complication with pregnancy, I do not remember having read any precisely similar case.

The first thing that strikes one is the little tendency to miscarriage which was manifested. There was no indication whatever of approaching labour until the time of the operation, when the patient began to feel slight pains. In another severe case of diphtheria in a pregnant woman which I saw lately with Dr W. A. Finlay, the patient, who was at about the sixth month, recovered and went on to the full time.

I think we may therefore conclude, so far as the evidence of only two cases is of value, that diphtheria *in itself* is not one of those febrile diseases which have a distinct tendency to produce abortion in pregnant women. Such a tendency, we know, exists in a very high degree in cholera, and to a lesser extent in typhoid fever.

It appears probable that the miscarriage was directly due to the highly carbonized state of the blood which was present at the time of the operation, assisted, possibly, by the shock of the operation itself.[1] Carbonic acid poisoning is well known to be very generally attended by miscarriage when it happens in a pregnant woman; and we may therefore, perhaps, expect that when laryngeal diphtheria has advanced so far as to thoroughly surcharge the blood with carbonic acid, this fact may be sufficient to induce the premature expulsion of the ovum. This view is further supported by the parallel case of pregnancy, complicated by severe heart-disease. Such patients frequently miscarry, after the supervention of secondary pulmonary œdema or other lung affection interfering with the proper aeration of the blood, and the fœtus is not unfrequently born alive.

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[1] In 1870 I saw a case which illustrates the amount of injury which a pregnant woman will bear without miscarrying. The woman, a multipara, within a fortnight of the end of her pregnancy, fell into a vat of boiling beer, and was very seriously scalded as high up as the umbilicus, the only part below this point on which any skin was left being the feet and legs up to the knees, which were protected by thick woollen stockings. She went on to her full time, and was delivered of a living child, but sank from exhaustion a few days after her confinement. There was great difficulty in getting her delivered, owing to the swelling of the vulva and the pain produced by separating the thighs.

I feel quite certain, however, that but for the operation Mrs T. would have died undelivered.[1]

It has been shown by Kaminsky that in fevers miscarriage is frequently due to the death of the fœtus, caused by the high temperature. A continued temperature of 104° almost always proves fatal to the fœtus. In our case, as far as I can recollect, 103° was the highest point reached, and the child was born alive. The miscarriage was clearly not due to the extent of fever. It is generally stated that in labour occurring during the progress of a fever there is a great tendency to severe hæmorrhage. Not only had Mrs T. no hæmorrhage, but the uterus contracted at once very firmly, and remained in a state of very rigid contraction.

The labour was attended with very little suffering, and the patient, who was quite conscious and even cheerful, watched the process with interest. She was a woman of high courage and fortitude, and bore the tracheotomy without a groan; but it is probable that at that time her sensibilities were much blunted by the extent to which her blood was charged with carbonic acid. This condition had to a great extent passed off before delivery.

Decided improvement in her general condition naturally followed the labour. The lungs had more room to expand and the heart to act, and the breathing in consequence was much relieved.

There was no evidence that the disease had affected the organs of generation. A case is related by Trousseau where, after a difficult forceps delivery, diphtheritic patches were first observed about the vagina and vulva, and only after several days made their appearance in the throat, and then proved rapidly fatal. In that case the infant also succumbed to the disease.

The sequel was a sad one. The child, though feeble, did well for the first three days on the bottle. At this time the monthly nurse was taken ill with a severe attack of diphtheritic bronchitis, and her friends insisted on removing her to Glasgow, where she ultimately died of the disease. After this the child began to pine, refused the bottle and the breast of a wet-nurse, and died, at the end of a week, of inanition. It presented no symptom of being injured by the diphtheritic poison.

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## ARTICLE VII.—*Clinical Observations on the Temperature Changes, Acute Decubitus, Urinary Disorders, etc., following Fracture of the Vertebral Column.* By J. C. OGILVIE WILL, M.D., F.R.S.E., Surgeon to the Aberdeen Royal Infirmary.

GENTLEMEN,—The case to which I propose inviting your attention to-day is that of W. D., a seaman, æt. 37, who is at present an inmate of Jacob's Ward, and who was admitted to hospital upon

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[1] See Macdonald, *The Bearing of Chronic Disease of the Heart upon Pregnancy, Parturition, and Childbed.* London, Churchill, 1878.

1st November, on account of an injury to his back which he sustained about half an hour previous to his admission.

In examining the case I intend to consider, first, the nature of the local lesion from which I believe the patient to be suffering, and then to pass on to a detailed review of the symptoms he has presented, and their causes. When the man was brought here he was suffering from paralysis of his lower extremities, the result of the injury inflicted upon his spine by its violent contact with a chain during a fall which he sustained while crossing a plank leading from a ship to land. From the instantaneous occurrence of the paraplegia I stated to those of you who were with me at the time that he had probably sustained fracture of his vertebral column; but as he was under the influence of liquor, and very noisy, no opportunity of verifying the diagnosis was then afforded. Subsequent examination, however, proved that it was correct, for on following the spinous processes with a finger, when the eighth dorsal spine was reached it fell into a pit, which indicated that the spinous process of the adjoining vertebra was not in its normal position. No crepitation could be felt, but on account of the extreme pain which digital pressure occasioned, and of the danger of increasing the injury, only very cautious attempts were made in the direction of ascertaining the exact nature of the lesion, *i.e.*, whether we had a fracture, or a dislocation and a fracture, to deal with; and this point is for all practical purposes a matter of no moment when the vertebral column forms the subject of inquiry. It was sufficient for us to know that the patient was suffering from a lesion of his spine, by which bony pressure was being exerted upon his cord. From the situation of the injury it was safe to assume that it was certainly not dislocation alone, for although luxation may occur in the cervical and lumbar regions, it cannot do so in the dorsal division of the vertebral column. Fracture may, of course, take place in any part of the spine, and may vary in degree from a mere splintering of a spinous process to complete destruction of a number of vertebræ. I do not intend to speak of the treatment or prognosis of such cases at any length; but I may tell you that, although reduction of a dislocated vertebra has been successfully accomplished, and trephining of the spine in cases of depressed fracture has been practised, I would not inculcate the adoption of such procedures, and that from the first I felt that our patient was doomed, and our efforts have been concentrated in the one desire to render his remaining days of life as easy and free from suffering as circumstances permitted.

We shall next proceed to an examination of the symptoms presented by our case, the first of which—the paralysis of his legs—need not detain us long, for at our last meeting I discussed this question at length in connexion with the case of traumatic inflammation of the spinal cord which I then brought before you. Suffice it to say, that the paralysis was both instantaneous and permanent, that the loss of voluntary motion was complete, that pricking with a needle driven well into the soft parts was not felt, and that the muscles failed to respond in the slightest degree to the galvanic tests which were employed.

The first symptom to which I purpose directing your attention at length is the state of the temperature, which was taken several times a day at two distant points, viz., in the axilla and between the scrotum and thigh, with the result that the thermometer invariably showed a greater degree of heat in the latter situation, *i.e.*, the temperature was higher in the parts situated below, than in those above, the point of injury. I need not occupy your time by going over the temperature chart, but I may simply state that on many occasions there was one degree of difference between the two parts, that on the evening of the first day the temperature of the paralyzed parts was 100·3°, on the third day 100°, and on the fifth day 99·40°.

Before attempting to account for the differences observed in the temperature of the paralyzed and unparalyzed parts, I may mention that in cases of injury to the cord a decided thermal rise is generally met with, and that this is most manifest in cases of depressed fracture in the cervical region. In the last case of vertebral fracture with compression of the cord, which was under my care in hospital, the thermometer registered 103° in the ear, and 104° in the anus twenty-four hours after the occurrence of the accident, and twelve hours later it reached 105·4°, soon after which the patient expired. In that case *post-mortem* examination revealed fracture of the sixth cervical vertebra, with dislocation of the fifth, leading to fatal compression of the spinal marrow; and it is, as I have just stated, in such cases that *great* temperature rises are to be looked for.

In entering upon an examination of the causes of these thermal disturbances, I must conduct you for a few moments to the region of physiology; and let me first remind you of the arrangement of the vaso-motor apparatus. The diagram which our accomplished house surgeon, Mr Jamieson, has drawn for me shows that the great vaso-motor centre is situated in the medulla oblongata; that it is continued down the spinal cord without giving off any branches until the lower cervical spine is reached, when the distribution of its nerves commences, their branches issuing in the anterior roots. An ascending twig joins the inferior cervical ganglion, passes through the superior, and supplies the vessels of the ear. Subsidiary centres are met with throughout the whole length of the spinal cord as far as the lumbar region, they lie chiefly in the lateral columns, and possibly in the gray matter, and their nerves pass out in the anterior roots.

Experimental physiologists have divided the cord at different points with a view to ascertain the effects produced by cutting off the nerve supply of the bloodvessels, and they have found that its division at any point is followed by a transitory, but decided dilatation of *all* the arteries below the point of section, and that from the increased afflux of blood the temperature of the parts rises. You must note specially the fact just stated, that section of the cord not only influences the state of the arteries supplied by the part of the cord where the injury is inflicted, but that all the vessels below the point are affected, and this is undoubtedly due to the shock sustained by the subsidiary centres in the underlying portion of the spinal cord from the performance of the operation. The greatest degree of vaso-motor disturbance has been found to follow division of the cord in the cervical region, and this you will readily understand if you bear in mind the peculiar arrangement of the vaso-motor apparatus in that situation, of which I have just spoken.

Now, if we apply these physiological facts to the case under notice, and to that of the cervical crush to which I referred, we can readily understand the rationale of the increased temperatures which they evinced. In our present case we had pressure on the dorsal cord, attended by an increase of temperature between the thigh and scrotum, and doubtless in all the other parts below the point of injury, and in the case where the cervical cord was crushed, there was a decided rise at two distant points—the ear and the anus—and as in the other, no doubt elsewhere, the cause in both being pressure upon the cord, in the former in the dorsal, and in the latter in the cervical division of the spine, while the normal action of the subsidiary centres was upset by the shock transmitted to them when the accidents took place. You will observe that the temperature was much higher in the one case than in the other, and this corresponds with the results of experimental section, and its explanation is of course similar. Why the temperature did not rise higher than it did in the case of dorsal injury will be spoken of subsequently.

But, gentlemen, in some cases of bony compression of the cervical cord an opposite condition is met with. We find that instead of a rise in the temperature, the thermometer shows that it is actually sub-normal, and that, too, not at a late period after injury, but within a few hours of its infliction. This is undoubtedly a very startling fact, but I think that we are able to account for it in more ways than one. In seeking for an explanation, I may first tell you that in those cases of sub-normal temperature the pulse, instead of being full and incompressible as it is when the temperature is greatly increased, is slow, feeble, soft, and small. In proof, I may cite a case of crush between the sixth and seventh cervical vertebræ, recorded by Mr Le Gros Clark, where the temperature was 93° F. on the patient's admission to hospital, and gradually fell to 82° F. a few hours before death, which took place forty-eight hours after the accident. On the second day the pulse was 42, "irregular in force and rhythm, soft and small," and it fell to 39 before death. This correspondence between the pulse and temperature would lead us to infer that the heart is at fault, that it is enfeebled, and that it is unable to avail itself of the opportunity afforded by the paralyzed condition of the arteries to gorge them with blood as it does when no directly depressing influence is brought to bear upon it. Thus we would make the heart responsible for the divergence from what is usually seen after spinal crush, and we are perfectly justified in our action, for, as Mr Jonathan Hutchinson has well said, "the nerve supply of the heart is known to exercise a most important power in restraining, or depressing, and in exciting its action, and there is nothing very improbable in the supposition that the cardiac nerves may be influenced in different ways in relation with the precise extent of injury to the cervical cord and its ganglia." And I would point out to you that although our present patient's temperature was abnormally high, it never reached the pitch that might have been looked for; and I believe that the explanation of sub-normal temperature which has just been offered holds good, for it was noticed from the first that the cardiac action was feeble, and that the pulse was very different from that of the man who sustained the cervical crush, and I doubt not that the reason was an interference with the due innervation of the great circulatory centre—the heart.

There is, however, another explanation of this phenomenon which is well worthy of notice, and by which the induction of low primary temperature may be accounted for, and here I must again refer to experimental physiology. In a paper treating of shock, contributed a few years ago to the *Practitioner*, by Dr Lauder Brunton, he directed attention to an observation of Goltz, of Strasbourg, who found that on striking the abdomen of a frog several times its heart stopped altogether. After a short period the heart again went on, but instead of becoming completely full during each diastole, and sending a large volume of blood into the arteries at each systole, it remained pale and empty—no blood, or very little flowed into it during the diastole, and consequently there was no blood to send out when it did contract. Goltz, on further examination, found that the blood was stagnating in the abdominal vessels, which are so capacious that they are capable of containing the whole blood of the body when the vaso-motor power is destroyed, or is in abeyance.

Now, we can apply this fact to the condition we are treating of, and I think that it will meet our requirements in a very satisfactory manner. We can readily suppose that the injury inflicted upon the cord might be of such a character as to cause paralysis of the great vaso-motor nerves of the abdomen—the splanchnics—a condition which would be attended by paralysis of the large trunks of the cœliac, mesenteric, and other abdominal vessels, which, from their paralytic distensibility, would be capable of holding the great mass of the circulatory fluid, and the other parts of the body being thus deprived of blood, a fall in temperature in these regions would certainly result.

Having now accounted for both the usual and unusual conditions of the temperature, in what, I hope, has been an intelligible and plausible manner, I must next remind you that when a rise of temperature does take place it is not permanent, and that although, as in our present case, it may extend over a considerable period, an actual diminution will be ultimately established if the patient survives long enough. A restoration to a *normal* degree of heat can be easily understood, for the vaso-motor centres, or some of them at any rate, recover their lost functions, and the vessels again respond to their influence, and although our ground is not certain, we can find a sufficiently reliable explanation of the *sub*-normal thermal condition just alluded to. It is founded upon the supposition, that the ultimate state of every paralyzed part is one where loss in heat production actually takes place ; and it has been stated, and possibly correctly, that " abolition of all function in the part, of motor power in muscles, and of sensation in the skin, is attended by a torpid state of cell life unfavourable to the production of heat," and trophic nerves will soon, in all likelihood, be found to play an important part here when their functions are better understood and, I may add, when their existence becomes a proved fact, instead of being as it is now a mere matter of inference. Whatever may be the cause of this lessened heat production, we are prepared to allow the correctness of the belief that paralyzed parts do ultimately become colder than other parts of the body, and this is sufficient for our present purpose, we may therefore now inquire what bearing this may have on the temperature of the whole blood flowing through the body. Let us suppose that we have a case where the lower extremities are paralyzed, and where the stage of diminished heat production has been reached, under these conditions the blood flowing through these parts must of necessity undergo a cooling process during its passage, and this must inevitably result in proportionate cooling of the whole blood. This cooling process must increase in ratio of the extent of the body affected, therefore if the paralysis involves a wide area, we should naturally expect a decidedly low temperature, if a lesser one then not so manifest a diminution, and so on. This explanation was brought forward by Mr Hutchinson, chiefly in support of a view which he advanced in connexion with low primary temperature, but whatever value it may have in that connexion, it certainly seems to me to be a most rational method of accounting for low temperature in prolonged paralysis.

The next symptom requiring notice is one of the greatest possible interest, viz., the bed sores which have committed fearful ravages in the case we are now considering. Our patient has two bed sores, one of minor size and importance on his left hip, occupying the seat of an abrasion, which had taken place in the course of his fall, and another which commenced directly over the sacrum, and which has extended towards both left and right sides. To such sores the names of acute decubitus, or eschar of rapid development, have been applied in distinction to a very different lesion known as chronic decubitus, which is very frequently met with in cases of lingering illness from any cause. The characteristic and distinguishing points of acute decubitus are speedy onset, for it often appears almost immediately after the spinal injury, or on the occurrence of an exacerbation, and its very rapid and destructive progress. Before saying anything regarding the mode of production of eschars of rapid development, I may remind those of you who have watched the case, that the man had a very slight abrasion on his left hip, which, when first examined, looked as healthy as such trifling injuries generally do when seen on other parts of the body; but upon 6th November it presented an angry-looking, inflamed appearance, discharging unhealthy pus, but it was still comparatively superficial. Soon after this the second sore commenced with redness over the middle of the sacrum, on which bullæ were quickly developed. These bullæ were soon ruptured, leaving a bright red surface studded with livid spots, and in the course of a very short time gangrenous action showed itself. Upon 18th November both sores presented well-marked gangrene, but at that date and subsequently there was a marked difference between the two sores, both so far as their extent and condition were concerned. In the one—that occupying the site of the abrasion—the area involved by gangrene was confined to the limits of the original injury, and its surface was dry and secretionless, there was simply a black central patch, surrounded by a halo of redness. In the other sloughing had proceeded apace, for the extent of skin involved at this early date already far exceeded that of the former, while its surface, which was covered with large sloughs, secreted a copious, highly purulent discharge. These differences became even more marked as time went on, for the first sore remained *in statu quo* until 29th November, while the second one committed great havoc, for it spread both in depth and width, laying bare the sacrum, and involving the soft parts to such a degree that its transverse measurement was eight inches, and its longitudinal five inches. Ultimately the sores became continuous, not from extension of both, but from the invasion of the second sore on the territory of the first one.

We may now consider what was the cause of these sores, and what lesson, if any, the difference in their behaviour, on which I have dwelt, teaches us. But, before entering upon this, it is necessary for me to explain some points connected with acute decubitus, with which you are probably unacquainted. And first, I may state that this symptom is a very common one in cases of spinal injury, that it is also met with in some cerebral affections, and that its presence is so significant of a fatal issue that it has been well termed decubitus ominosus; that it often commences as early as the fourth or fifth day after spinal injury; next, that in spinal affections it almost invariably commences over the sacrum, in which it differs from that whose cause is cerebral mischief, where the sore appears near the middle of the gluteal region of the palsied side; and lastly, that in hemi-paraplegia, *i.e.*, in lesions of one lateral half of the spinal cord, acute decubitus is found on the opposite side to that of the lesion. Observers are at variance as to whether a fracture high up, on one low down, is the more conducive to the production of acute bed sore, but, as Ashurst, who has examined into the history of 400 cases, states that it is more likely to occur the lower the seat of the lesion, this is probably correct. These eschars are not only dangerous in themselves from their destructive tendencies, but they constitute dangerous foci of infection, leading to putrid toxæmia, as they have actually done in the present case, to metastatic abscesses in the viscera, to gangrenous affections of the lungs from transportation of gangrenous emboli, and other disorders.

We are now prepared to examine into the causes of this most appalling affection, and in conducting this inquiry, I must bring before you the views which have obtained from time to time, dealing with each one critically, in the hope of arriving at some tenable, though perhaps not definite, conclusion. The first question that would naturally occur to any one would be, What part does pressure play in the production of acute decubitus? Very slight consideration of what has been already said would suffice to show that it plays a very minor one indeed. If you recall to mind the facts concerning acute bed sore which I enunciated, you will readily perceive why pressure cannot be accepted as the cause. Decubitus acutus has been known to commence as early as sixty hours after the traumatism, and it has been well marked on the fourth day; what influence could we assign to pressure in these cases? There is but one answer—None. Which one of you has not seen a patient, the subject of fracture of the thigh, confined to one position for a series of weeks, and who among you has seen the case complicated by acute bed sore? I unhesitatingly reply, Not one of you; and yet how common an event should this be if pressure were its cause! Again, if pressure occasioned acute bed sore we should have a symmetrical arrangement—one on either hip—in cerebral cases, but it is asymmetrical; and in spinal hemi-paraplegia we should have the paralyzed and non-paralyzed sides equally affected, but it is not so. Still further evidence might be adduced. Charcot made patients suffering from cerebral lesions repose upon the non-paralyzed side, but this precaution did not avert the occurrence of the sore in its usual situation. In fine, the only possible argument in favour of the pressure theory is, that acute decubitus is met with on such parts as the nates, sacrum, knees, and ankles—parts exposed to pressure—and even this argument seems to me to be invalidated by the clinical facts already adduced, so we may safely say that it is not to pressure that this disorder is in reality due. Nor is it to irritation produced by urine coming in contact with the parts, for the urine has been carefully drawn off, and its contact with the neighbouring parts successfully prevented, yet the sore appeared. What, then, is the cause? Has the vaso-motor paralysis, and consequent neuro-paralytic hyperæmia anything to do with it? Here our answer must again be in the negative, for experiments have shown that there is no special tendency to inflammatory changes in parts where vaso-motor paralysis exists, and we know that other trophic derangements, such as eruptions on the skin, which are also often seen in connexion with nerve lesions, are not found where there is a high temperature of neuro-paralytic origin, but that the seat of these lesions evinces an actual loss of heat production. In proof of the correctness of what has been stated let me refer to some experiments of Claude Bernard and Ollier. These experimental physiologists found that, after division of the great sympathetic in the neck, the consequently increased blood supply was not attended by increased growth of the part; that the hyperæmia however intense or prolonged did not occasion inflammatory action; and that if inflammation was artificially excited, the morbid process proceeded in a manner precisely similar to that observed under normal conditions, with one important exception, viz., that the parts showed an abnormal tendency to heal. The most conclusive experiment of all was that of Sinitzin, who, after extirpating the superior cervical ganglion on one side, introduced a slender stem of glass into the cornea of the same side, the result of which was slight inflammatory action, while the insertion of a similar irritant into the cornea of the opposite side was followed by purulent inflammation of the cornea, iritis, and panophthalmia. I should, however, mention that an opposite view has been advanced by Schiff, who states that in parts where neuro-paralytic hyperæmia prevails, the slightest local mechanical irritant may give rise to changes of nutrition, and that the inflammation readily takes on a destructive character. These conflicting statements are somewhat confusing, but, so far as one can judge, the views of Claude Bernard seem to obtain most credence, and I think that the behaviour of our abrasion-sore might be taken as clinical evidence in their favour, for the part occupied by the abrasion, which might of course be regarded as the starting-point of an inflammation, did not form the focus of such an inflammation at an early period, but remained quiescent and almost unworthy of notice when compared with the sacral sore which speedily out-stripped it in both malignancy and growth. And there is another point to which I have not yet alluded, but which is not undeserving of attention, viz., the abrasion-sore presented a dry and almost withered aspect until 29th November, when it began to show signs of malignancy, to eat its way into the deeper tissues, and to discharge septic fluid, and this actually coincided with a distinct fall in the temperature of the paralyzed parts. These facts would in themselves tend to prove that vaso-motor paralysis has no connexion with the production of eschars of rapid development, and, when taken in conjunction with the other points I have mentioned, they seem to me to be a sufficiently reliable refutation of the theory of the production of decubitus acutus based upon the neuro-paralytic hyperæmic hypothesis.

Anæsthesia of the parts cannot be accepted as an explanation worth consideration, for in one case the bed sore appeared on the very day that the patient recovered sensibility in the previously anæsthetic parts. So far then, gentlemen, we have only considered what cannot occasion this symptom, and we have now only two possible causes to examine. The first is that held by Charcot—that in the majority of cases there is evidence that the diseased or injured part of the cord has been the seat of *inflammation*, and that there has been extension of this inflammation to the inferior segments of the cord, and that it is the " irritation " propagated from the seat of injury to the periphery that determines this depraved nutrition of the skin. The second explanation is founded upon the existence of trophic nerves, and this I regard as the correct solution, for Charcot's theory does not recommend itself to us, in that every neuritis is not followed by trophic derangements at the periphery, and that the evidence of this neuritis or irritative lesion is not complete; and, as Vulpian has well said, how can a nerve which has lost both its normal structure and physiological properties, even although inflamed, convey any influence irritative or otherwise? Therefore, as a recent reviewer has put it, " we are compelled to adopt the hypothesis that the peripheral nutritive defect is due to the loss of some influence which, under normal circumstances, is conveyed to the nerve injured. In other words, that there are nerves which exert a special influence on the nutrition of the parts to which they are distributed, an influence which entitles them to the name of trophic nerves," and that the injury to the cord induces such a change in the trophic nerve influence or supply that mal-nutrition is the result, hence the occurrence of acute decubitus.

I shall now for a moment glance at a point connected with the condition of our patient's lower extremities, which I purposely left unnoticed until this period of our lecture, for the reason that the rapid muscular atrophy, which he presents to a very great degree, and acute bed sore are generally concomitant. In searching for the cause of this atrophy, we ask, Is there any inference to be drawn from the simultaneous development of the two conditions? Have they a common origin? I think that the answers must be in the affirmative.

Let me next invite your attention to the phenomena observed in connexion with our patient's urinary functions. On admission he complained much of a desire to micturate, but he was unable to void a single drop of urine, although his bladder formed a prominent tumour in his hypogastrium, showing that it was distended with water. A catheter was passed, and the vesical contents were evacuated, and as complete retention continued for some days, a similar course was pursued several times daily. This indicated paralysis of the expulsive apparatus of his bladder, the result of the shock inflicted upon the lumbar centre which presides over the detrusor; and this is precisely what is seen when the dorsal spine is divided in lower animals. Upon November 6th, spontaneous, but not voluntary expulsion of urine in the shape of dribbling occurred whenever the bladder became at all distended. In attempting to account for this condition—viz., retention with involuntary micturition or ischuria paradoxa, as it has been termed —it has been stated, and that, too, in one of the most recent German works treating of the subject, that "the detrusor is paralyzed with the sphincter also;" but that is not sufficiently explanatory, if it is, in fact, an explanation at all, for I believe that in those cases where we have paralysis of both detrusor and sphincter, the mere presence of the double palsy cannot be regarded as in itself the cause of the dribbling, but that the *vis a tergo* supplied by the constant flow of water from the ureters, which in turn displaces a like amount of water, and which finds egress at the weakest point in the bladder wall—the meatus urinarius internus—must be regarded as the true explanation of this phenomenon. In proof that simple paralysis of detrusor and sphincter is insufficient, let me remind you of what you have all seen when a catheter is passed into a bladder which has been for long distended with urine, and from which distension the expulsive muscular fibres of the vesical wall have become "atonied." I doubt not that you have all observed that manual compression of the hypogastrium was required to cause the flow of urine, and the cases are exactly similar. There is in the one paralysis of detrusor and sphincter of nervous origin, and in the other paralysis of the detrusor and temporary suspension of the action of the sphincter from the presence of the catheter within the neck of the bladder, both of mechanical origin, and the results are, as they should be, the same. But, although I would assign the chief place to the *vis a tergo*, there is, at least, one other factor in the production of dribbling, it is respiration. The inspiratory act is attended by the ejection of a small quantity of urine during the residence of an open catheter within a full bladder, and it is doubtless attended by a like effect in a bladder whose detrusor and sphincter are both paralyzed.

Such then are, I believe, the causes of ischuria paradoxa, but they do not furnish us with an explanation of the next phase of the dribbling noticed in our case, viz., trickling away of water long before complete distension of the bladder took place. From this we must infer that the detrusor was recovering its power, and that the sphincter vesicæ was paralyzed. The correctness of the former inference—the recovery of the detrusor—was proved by the observation, that less and less assistance from digital compression of the hypogastrium was required to cause the flow of urine through the catheter when it was passed, and upon 21st November Mr Blunt, the most intelligent and attentive dresser who has charge of the case, noticed that nearly the whole of the urine, of which there was a considerable quantity, was voided through the instrument without manual assistance. It was also found on various occasions, that the mere entrance of the catheter into the fossa navicularis was sufficient to excite a reflex contraction of the bladder, a squirt of urine issuing from the meatus before the catheter had time to reach the vesical cavity. This recovery of the lumbar centre from the shock transmitted to it at the time of the injury to the dorsal spine also corresponds to the results obtained by experimental physiologists. Pursuing the record of our case still further, we find that soon after the recovery of the detrusor, dribbling increased to such a degree that catheterism was uncalled for, and this still continues,—an occurrence which we must ascribe to vesical catarrh, of which I shall speak presently, hypertrophy of the bladder walls, and diminution of the capacity of the bladder. But, gentlemen, I have left one point unnoticed; I have followed the paralysis and recovery of the detrusor to the end, but I have not yet tackled the palsy of the sphincter vesicæ. I accounted for dribbling by supposing that the sphincter was paralyzed, and that the detrusor was recovering, but you may ask, Why should any water have remained in the bladder if the theory which I have framed be correct? The question is undoubtedly a pertinent one, and one not easy to answer, and the only suggestion I can offer is, that the recovery of the detrusor being only partial, it was not able to contract to such a degree as to empty the bladder of its whole contents.

In the course of a few days after the accident we found that, in addition to the abnormalities connected with his urinary function, the urine itself had undergone changes, for it was alkaline, putrid, and bloody, and contained a large quantity of mucus, which was so abundant that on one occasion it blocked up the catheter. This condition of the urinary secretion is an invariable accompaniment of serious injury to the cord, but its explanation is a matter of dispute. Traube and others hold that it is due to the introduction of putrefactive germs into the bladder by means of an unclean catheter, but here we attempted to guard against this possible danger by lubricating the catheters with carbolic oil. Erb, Rosenstein, and others, state that it arises from retention of urine, ammoniacal decomposition, cystitis set up by these changes, and a spread of the inflammation along the ureters to the kidneys; while Charcot draws attention to the very early changes which the urine may show, citing cases recorded by Sir Benjamin Brodie, where ammoniacal decomposition was present on the second or third day after injury; and he states that for so rapid a development of the inflammatory lesions of the urinary pasages after traumatic or spontaneous affections of the spinal cord, he can neither accept the explanation founded upon paralytic retention as "the sole, nor even as the predominant, pathogenic element," nor is he prepared to admit the value of the germ theory, regarding which he says that the "introduction of vibriones into the bladder could only be a chance occurrence, whilst the appearance of ammoniacal, sanguineous, and purulent urine is what may be termed a regular fact;" and in view of the very rapid urinary changes which follow injury of the cord, he argues that the most probable explanation is to be found in "irritation of certain portions of the spinal centre, and more particularly, no doubt, of the gray substance." Professor Stirling has offered me another explanation, and it is, to say the least, as plausible as any yet brought forward. He suggests the possible development of some ferment in the epithelium, through whose action upon the urine these changes may be induced. This ferment may result from disturbance of the trophic nerve supply, and its development may be due to the absence of the natural healthy influence which these nerves normally exercise, or to their conveyance of some new hurtful effects, by which a substance capable of exciting decomposition is manufactured; so trophic nerves once more come to our aid in explaining away the difficulties by which our path is beset.

The incontinence of fæces, from which our patient suffered, admits of an easy solution, viz., paralysis of the sphincter, with continuance of peristalsis, the fæculent mass being gradually pushed towards the anus, and the controlling power of the sphincter being lost, there was no barrier to its egress. The nerve supply of the intestine, derived from the vagus and sympathetic, was probably unaffected, and even if it had been, the intrinsic ganglia in the walls of the gut would have sufficed to keep up the peristaltic action of the intestinal tube by which fæcal incontinence would have been induced.

The last symptom of which I shall speak to-day is the condition of the penis in cases of vertebral fracture. In the case of the patient who suffered from cervical crush, priapism was well marked, and in our present case the penis was somewhat swollen, but never actually priapismatic. The priapism arose from flooding of the erectile tissue spaces with blood, the penile vessels being paralyzed readily admitted of their over-distension,—a condition which the muscular fibres of the erectile tissue, from their paralysis, were powerless to prevent, and the swollen state of the penis in the case now under notice had a like origin.

These then, gentlemen, are the main features of interest connected with our case, and I trust that although this lecture has been more devoted to applied physiology than to practical surgery, you may have learnt one not unimportant lesson—that a knowledge of physiology is not only necessary for the correct interpretation of clinical cases, but that it will render the study of disease both useful and attractive.

## ARTICLE VIII.—*Address to the Medico-Chirurgical Society of Edinburgh, on January 7th, by the retiring President,* Dr SANDERS.

GENTLEMEN,—I have now to resign into your hands the Presidentship of your Society, with which, two years ago, you entrusted me. Two duties, however, still remain to be performed. The one is, to thank you, as I most cordially do, for the great honour you bestowed upon me in my election to the high and honourable office of presiding at your meetings; the other duty requires me to address to you some words at parting on the business of the Society, and on the present position of that great profession to the improvement and promotion of which this Society is specially devoted.

During the past two years the communications and papers brought before us have embraced the more important departments of medical knowledge. Time does not permit me to dwell upon the merits of all, and a selection would be as difficult as it would be invidious. Yet let me remind you at least of the subjects which have been brought under our notice. In the department of Sanitary Science—one of the most interesting of all—you will remember the important paper by Professor Fleeming Jenkin on Sanitary Inspection. In Gynecology, the original views of Dr Angus Macdonald on the Pathology of Puerperal Eclampsia, with description of peculiar Kidney Lesion by Dr Hamilton; and Professor Simpson's successful case of Battey's Operation for Dysmenorrhœa, performed for the first time in Scotland. In Surgery, Symington on the Physics of Nerve-Stretching; Chiene on the Operation for Knock-knee, and on the Pathology of Counter-Irritation; Dr Duncan on Pain as a Symptom of Fracture; Professor Annandale on Suspension as a Mechanical Aid in Surgery; Professor Annandale and Professor Spence on the Choice of Operation in Strangulated Hernia, reduced *en bloc;* besides the Record of Important Operations by Dr Joseph Bell, and the exhibition of patients and of pathological specimens by Drs Watson, Bell, John Duncan, Miller, M'Gillivray, and others. To Dr Cadell and Dr John Duncan we were indebted for contributions on the subject of Syphilis; to Dr Allan Jamieson, for interesting papers (especially one on Psoriasis) and cases of the rarer forms of Skin Disease; to Dr Kirk Duncanson, for specialties in Diseases of the Ear, and new instruments for their investigation; and to Dr Argyll Robertson for cases of Eye Disease. In Therapeutics, Professor Rutherford gave us the last result of his discoveries in regard to the Secretion of Bile and the action of Cholagogues. Dr Craig (on the Essential Oil of Aloes) and Dr Jamieson also contributed; and Dr W. Stewart related a rare case of Poisoning with Fusel Oil and Aconite which had come under his observation. The papers on Pathological Science were not, I think, less valuable; they certainly were listened to with no less attention than subjects more immediately practical. I note especially Dr James's researches on the Physics of the Bladder and Ureters, and his recent paper on Transudations and Exudations; I note also Dr Hamilton's paper on the Healing of Wounds, besides numerous incidental communications on Glomerular Nephritis, Catarrh of Bronchi, the Blood of Diabetes, Fat Emboli, etc., etc. I must not omit, also, the case of Double Floating Kidney diagnosed during life and examined post-mortem by Dr Hunter of Linlithgow, as tending to settle disputed points as to the occurrence of this displacement; also a rare case of Congenital Malformation of the Leg by Dr Craig. Lastly, in the department of Practical Medicine, in its limited sense, we had brought before us the subjects of Tendon Reflex by Professor Grainger Stewart and by Dr Byrom Bramwell; Clinical Studies on Cases of Intra-cranial Tumour, and on Cases of Aneurism, by Dr Byrom Bramwell; Two Cases of Lesion of the Temporo-Sphenoidal portion of the Brain, by Dr James Carmichael; with description by Dr Hamilton of peculiar structures, hitherto undescribed, in the tumours. From our *confrères* practising abroad we had the important paper by Dr Henderson of Shanghai on Sudden Death from Aneurism by Rupture, and on Elephantiasis Arabum; by Dr Husband on a Tumour from the Region of the Clavicle; and the contributions of Dr Wortabet on the Plague in Bagdad, and on Bilharzia Hæmatobium. Most gratifying is it to find that in distant climates our members keep up the scientific cultivation of their profession, and do not fail to favour the Society with the results of their experience. Other papers were read, on Tetanus and Smoking of Cannabis Indica, by Dr Lucas; on the Military Barracks and Hospitals of Tours, by Dr Black. Besides all these, the exhibition of patients and demonstration of morbid specimens by Dr Claud Muirhead (Pernicious Anæmia); Dr Andrews (Tubercular Tumour of Brain, Tubercles of Kidney, Bladder, and Intestines, etc., etc.); Dr G. W. Balfour (Dilated Heart, Diabetes, Athetosis); Professor Fraser (Hæmorrhage into Pons); Alexander Thom of Crieff (Cases in Provincial Practice); Dr Clouston (Fat Emboli in Brain and Lungs); Dr Littlejohn (Post-mortem Digestion of Stomach, Diphtheritic Intestine in Small-pox, etc., etc.); Professor Stewart (Pott's Curvature treated by Apparatus); Mr Miller, Professor Spence, etc. Such is a brief summary or catalogue of your labours during our last two sessions. Of the instructive discussions to which these papers gave rise it is unnecessary that I should remind you.

On reviewing this list of work done, not only does it appear that most subjects of recent interest have been submitted to us, but what we may specially note in these, as in previous years, is the admixture of purely scientific with practical papers and communications. And it is on this point that I would now address to you a few brief remarks, because, so far as I can see, the present position and prospects of our profession are intimately associated with it.

At all periods of its history the progress of medicine (including all its departments) has largely depended on the application to the study of disease of that particular kind of knowledge which happened to be most cultivated and full of promise of results. Sometimes religion, sometimes so-called philosophy, sometimes one of the physical sciences, sometimes another, has given a particular bias to medical inquiry. In recent years, and in our own day, with the enormous development of science, we cannot doubt that the special problem that lies before us in advancing medicine is especially the right cultivation of the physical, and especially the biological, sciences, and their proper application to medical practice. We are all, I think, agreed upon that fundamental principle; but do we all realize what it implies? Have we the proper means for carrying out its requirements? Are there errors or defects into which we may fall in carrying the principle into execution? I shall not attempt to answer those queries, more than to offer to your minds some suggestions that have occurred to my own.

*First*, In regard to the cultivation of physical and biological sciences, I have to affirm that the means at our disposal, as a profession, are wholly inadequate. We must remember that as a profession we require not only that the results of sciences be taught, but more especially that the sciences themselves should be practically elaborated and advanced. Now, I am aware that in the laboratories which now at last, after many years of waiting, are being constructed in the new University buildings, there will be at least space and appliances for scientific work; there will probably be provision for the efficient teaching of students, and that is well. But where are the professorships for subjects not in the curriculum? Where are the scholarships and fellowships, or the special lectureships, to give encouragement to young men of talent to engage in those higher departments of work which are so unremunerative to those engaged in them, but so full of advantage to our whole profession in the advancement of the sciences on which our real efficiency depends? Why should classical learning alone have these advantages? Is the scientific investigation of the material world around us less difficult, less invigorating to the mental powers—no one certainly will say it is less useful—than the study of the classical languages and their literature? I need not, and I do not, depreciate the study of classics, but I maintain that the exclusive preponderance given to it in ages when there was no other learning ought not to be continued now. Till the natural and physical sciences are put on a sufficient footing of encouragement, so long will the education of our country be one-sided and defective, and some of the most precious and productive of the faculties of the human mind, viz., those of observation and invention, will fail to receive the culture and to attain the results for which they are fitted. As a necessary consequence, the advancement of the human race will be retarded, not in regard to medicine only, where that retardation is obvious and demonstrable, but in regard to all material progress, and to the intellectual and moral progress which so largely depends on material conditions. I do not stop to point out how these defects are to be remedied; but as a profession whose mission is the welfare of our fellow-creatures we are deeply interested in such considerations. I think the whole education of the country requires revision, and that the medical profession should make its voice heard in proclaiming the needed changes and improvements.

Before leaving the subject of the sciences, permit me only one word more. Were there a body of cultivators of science apart from the mere students for a degree, it would lead, I think, to this very desirable result, that students would not, as now, be instructed laboriously in all the transitional and uncertain parts of science—so difficult to teach and to learn—but would be taught practically by well-chosen examples the ascertained results of science, the obscure and unascertained points being left to special inquirers and cultivators. In this way the growing evil of burdening the minds of students with accumulating details might be successfully avoided. Scientific, like other armour, may be so heavy and unwieldy that, while it gives strength, it prevents movement.

*Next*, passing from the pure sciences to the scientific departments of practical medicine and surgery, I have here also to maintain that while the treatment of patients and the clinical instruction of students is kept up to a high standard, there is an absence of provision for new and original work. In this direction much good might be done by the institution of scholarships or fellowships, to which, as ought to be the case, I think, in all or nearly all scholarships or fellowships, certain conditions of work should be attached. We want not so much prizes or rewards for what a man has done, as a sufficiently independent position to enable him to do good work which happens to be unremunerative to the worker, though valuable in its ultimate results to the profession and the public.

These propositions are not new, but they still await general and practical recognition. I do not think any scheme of medical reform will avail that does not take them into account. It is not by stringent examinations (they are often too stringent already) nor by a readjusted minimum qualification that medical efficiency is to be secured. It is by more and better work, under favourable instead of unfavourable conditions. A profession is to be raised by its head and body, not by its tail. Universities and Royal Colleges might do something in the direction thus indicated, but hitherto they have not done so; it is to the great body of the profession and to public opinion that we must look for the accumulating force that will bring about improvements.

Gentlemen, only with two more topics will I venture to detain you. I wish, first, to express my opinion of the inefficacy of the teaching of so-called popular science, and, *inter alia*, of so-called physiology. As popularly understood, physiology is regarded as teaching the laws of health. But I fear physiology is thus mistaken for hygienics, which is the practical science of health. I have no objection, but, on the contrary, would gladly see the laity instructed in the functions of the body, or physiology; but I protest against mistaking that information as equivalent to hygienics. Physiology is only the basis for the science of health, of which hygienics is the practical side. And as I think that in our own profession the scientific should not take the place of (as it sometimes threatens to do), but be subsidiary to, the practical, so I think popular instruction in physiology should be made to bear results in better hygienics. I affirm it as my conviction, that in most cities the personal experience of the valuable qualities of pure fresh air in streets and in houses is unknown. It is an extinct sensation, which has to be reacquired. Personal cleanliness and clean surroundings need to be the subjects of a special education. To what purpose lectures with experiments on oxygen, nitrogen, hydrogen, unless people are directed practically to some recognition of the qualities of a wholesome atmosphere, and to some practice of cleanliness? Older religions enforced sanitary observances; cannot our modern education do likewise? Is it not a false use of science to teach smatterings of chemistry and physics and physiology, unless we can practically inculcate the means of recognising and securing pure air, and teach the methods of personal and domestic wholesomeness? When we consider the stuffy air and dusty, dirty homes of the majority of our population, can we wonder that ill-health and disease are so prevalent as we unfortunately find them?

Lastly, there is one subject to which I would beg your attention. It is that of latent or insidious disease. How often do we find patients coming to us with disease far advanced, the beginnings of which had been unnoticed or unheeded! How often, too, do we incidentally—as, for example, in examinations for insurance—light upon the evidence of altogether unsuspected disease! There is here a great field of inquiry which deserves attention, because we cannot doubt that the early detection of disease would afford better means for its cure, or check its progress. Moreover, our experience of these latent diseases, as well, indeed, as of first beginnings of many chronic diseases, has hitherto been hindered in consequence of patients not applying till their ailments produce pain or inability for their avocations. How is this difficulty to be met? I am aware the plan I suggest may appear impracticable, or may seem to encourage that excessive attention to health which engenders hypochondria and "maladies imaginaires." The plan, however, I suggest is, that persons in health should occasionally submit themselves, and their mode of life, and their family hygienics, to the wise counsel of their trusted medical adviser, who should make a careful examination, and keep a record of his observations and recommendations. I do not say that this plan is free from objections; but I submit it for consideration, because I cannot help being impressed with the fact, that many cases of ill-health which prove obstinate, if not incurable, when they come before us, might have been stopped and prevented by simple measures, and often by ordinary care, at their outset. The best family practitioners, indeed, already fulfil to some extent the purpose I have indicated. And what I think good for private families I should regard as indispensable for boarding-schools and colleges, etc., in which I have often known ill-health originate from flagrant neglect of the commonest hygienic arrangements.

Gentlemen, I fear I have detained you too long with these imperfect and discursive observations. It is, indeed, fortunate that, notwithstanding the many obstacles which prejudice and neglect put in the way of medical knowledge, yet, nevertheless, animated by a sense of duty and of the usefulness and dignity of your calling, you are found, amid the urgent and absorbing avocations of practising or of teaching medicine, able and willing to devote so large a portion of time, and with so much success, to the promotion of medical knowledge in this Medico-Chirurgical Society. In now resigning my place to one of the most eminent surgeons of our time, Dr Patrick H. Watson, I know the chair will be ably filled, and that I may expect fulfilment of my desires when I wish most cordially prosperity to this Society.

## DR FARR.

We write these lines under a sense of responsibility which would entirely overwhelm any political or party feelings, even were these present to our minds; but our readers well know that the *Edinburgh Medical Journal* is no party organ, and owes all its success, and even its very life, to being broadly based upon the sympathies of the whole medical profession. It is to these sympathies that we appeal, without respect of party, when we declare solemnly that the treatment lately endured by Dr Wm. Farr, the distinguished Superintendent of Statistics at Somerset House, is simply intolerable, and an outrage at once upon common sense, upon the self-respect of our profession, and upon statistical science. The facts are these: More than forty years ago (in 1838), Mr Farr, then a licentiate of the Apothecaries' Company, and a modest country practitioner, was called by the first Registrar-General of England (Mr J. H. Lister) to occupy the office he held till quite recently, that of Superintendent of the Statistical Department. He was even then not unknown to advanced inquirers as having a peculiar genius for mathematical and statistical solutions of medical problems, for he had communicated to the *British Annals of Medicine* a paper in which the science of probabilities was applied to determining the chances of recovery in cases of smallpox and other diseases at every stage of their progress. The work specially assigned to him in the Registrar-General's office was the arrangement, for the first time, of the materials which were to grow up in the hands of the Registrar bearing on the great vital and social phenomena connected with the births, deaths, and marriages of many millions of people. Nothing had been done before on a similar scale, and the precedents, methods, and working apparatus of the department had all to be created. Dr Farr gave his whole mind and heart to his work, and the well-known result has been that, the English system of calculating death-rates has become a model for all the world, and the English Registrar-General's reports—weekly, quarterly, annual, and decennial—have been everywhere regarded as furnishing for the first time the materials of sanitary science in a form such as to admit of universal application. Such a work as this is not a mere work of labour, though it implies, of course, immense labour; it is emphatically, and in the highest sense of the word, a work of genius. It is not too much to say of Dr Farr, as was said of him in a lecture in this school of medicine in 1861, that he "has done for the vital statistics of England almost what Harvey did for physiology, or Lavoisier for chemistry. He found the facts of this science in a state of almost hopeless and aimless confusion. He has not only added immensely to the number and value of these facts, but has brought into them light, harmony, order, and, for the first time in the history of the science, a determinate method and an approach to scientific exactness." This great work has been done unweariedly for forty years under two official chiefs, who, whatever their personal merits as administrators, would probably be the first to admit that their greatest merit was to have at first selected, and then cordially supported, the great and indefatigable thinker and, we had almost said, artist in figures, who in the reports produced under their official sanction, was educating the whole world how to use those figures aright. In Dr Farr's letters to the Registrar-General, even the literary style could not fail to command attention; while the vivid play of a carefully controlled imagination, a warm human interest in all social problems, and erudition always ample and exact, but never pedantic or ponderous, served to illuminate the dry details of science, and convert them into household words for all time. The man who has accomplished this work naturally stands in the front rank of the great army of leaders of human thought, and is, in a certain sense, independent of what governments or even scientific societies and universities can do for him. Yet it is a sad and a stern fact, as illustrating the nature of official routine in high quarters, and the small hope there is, as matters stand at present, of getting any due weight given to scientific (not to say medical) opinion in the national councils, that in England this man has not only remained to this hour plain William Farr, but has never been allowed to become the actual head of the office of which he has been the life and the soul for more than forty years. Of the many Registrar-Generals' reports; of the four censuses, each advancing on the preceding one both in definiteness of aim and exactness of detail; of the voluminous and yet most readable reports upon these censuses, not one has been permitted to see the light except under the auspices of official superiors, both of them, we believe, valuable public servants, but quite unknown to fame, anywhere out of London at least, but for the great work done under their superintendence by Dr Farr. And now we are informed that these two Registrars-General are to give way to a third of the same purely official type,—one who may or may not be a statistician in embryo, but whose antecedents seem to be absolutely void of any such promise, and whose name is only known to diligent readers of the Army List. Such is the barest possible statement of the ugly and ominous facts. Can it be wondered that the practical result for the present, so far as appears, is, that in the approaching census of 1881 we are to be deprived of the literally priceless aid of Dr Farr's counsel and superintendence, not to say of much of the slowly gathered experience of these four decennia? Is it not humiliating to think that in almost any other civilized country in Europe, William Farr, as a publicist and man of science of the highest class, would have been covered with stars and orders of distinguished merit, and would very probably have been made a Privy Councillor, if not a Peer, and admitted to the Senate, perhaps made a Minister of State in his own department? In England he is M.D. of Trinity College, Dublin; D.C.L. of Oxford; F.R.S.; ex-Superintendent of the Statistical Department, General Register Office, Somerset House; but just because he is only a medical man, and a man of genius, as well as of the first administrative capacity, no place can be found for him in our curiously-regulated system of public life except that of a subordinate. Nay, when the place is actually vacant, and the only man in Europe having an unquestionable claim to it is a candidate, it seems to be part of our political system of etiquette to allow an "unknown quantity" to be passed over his head, and to absorb the salary and official position justly due to forty years of the most splendid, laborious, and literally unexampled public services. But whatever the irony or the injustice of political fate, no one can doubt that by these services the name of William Farr has been rendered immortal, and through them alone has the department of the Registrar-General of England been redeemed from obscurity, and given the first place as a laboratory of medical and sanitary statistics for the whole world.

# Part Second.

## REVIEWS.

*Injuries and Diseases of the Lymphatic System.* By S. MESSENGER BRADLEY, F.R.C.S. London: J. & A. Churchill: 1879. 144 pp.

IN the first chapter of this book the author gives a brief but remarkably clear account of the anatomical arrangement of the lymphatic vessels and glands in the human body, and then proceeds to discuss the *physiology* of the lymphatic system. This latter task he accomplishes, apparently to his own entire satisfaction, in the space of rather less than a page and a half, the greater portion of which consists of a quotation from Professor Gamgee's translation of Hermann's Physiology. This quotation, admirable in itself, does not, however, as may be well understood, by any means cover the whole ground. For example, no mention is made of the rhythmical contractions of the so-called "lymph hearts," which occur low in the animal series, nor yet of a similar movement which Heller has observed in the lymphatics of the mesentery of the guinea-pig. We are left in ignorance as to what are the conditions under which lymph coagulates, and no notice is taken, in treating of the physiology of the lymphatic system (nor elsewhere, so far as we have seen), of the peculiar power which the walls of the serous cavities and lymphatics possess of preventing lymph from coagulating, while blood or inflammatory exudations, when applied to the serous surface, at once coagulate. It is hardly necessary to go further to show how very incomplete is the description here given of Lymphatic Physiology. With a feeling of no little disappointment we turn to the pathological part of the book. Here there is much of real interest; many clinical cases of importance on the subject are carefully detailed and analysed. Lymphorrhœa, lymphatic œdema, lymphangitis simple and septic, adenitis, lymphadenis, and syphilitic and cancerous infection of the lymphatic system are considered, in their turn, in relation to symptoms, pathology, diagnosis, and treatment. It is somewhat curious that tubercular infection does not receive more than a passing notice, considering its bearing in this connexion. Why glanders, anthrax, erysipelas, and snake-bite should be classed under the head of septic lymphangitis, it is difficult to understand (if we adopt the author's definition of the term "septic," *i.e.*, the offspring of putrefaction), since it is pretty well established that whatever the morbid poison may be in each of these diseases, it is not that producing mere septic change. It is possible that the author holds that the manifestations of these diseases, in so far as they affect the absorbents, are simply caused by the absorption of septic matter occurring simultaneously with the entrance of the specific virus; but were this so, it is clear that we would then have to deal with two diseased processes going on at the same time, viz., the specific disease *plus* septicæmia. That this occurs as a general rule the author will hardly maintain, except perhaps in the case of erysipelas. There is scarcely a distinct enough line drawn between a specific virus and the organism which produces ordinary septic change in pus.

With regard to the production of œdema, Mr Bradley appears to attach too much importance to the action of the lymphatics. However much lymphatic obstruction increases an already existing œdema, it is extremely problematical whether, supposing the blood-vessels and fluids to be in a normal state, any such obstruction could originate the œdema. The venous return, so long as it remains uninterrupted, is fully able by vicarious action to compensate for any lymphatic obstruction. It is probably only when the venous pressure rises too high, or the quality of the blood changes, that the occlusion of lymphatics plays a part in the production of œdema.

Though the pathology of the book appears to be rather weak, it is interesting and valuable in its clinical portions, and in the outlines of treatment which follow the description of each disease.

*Lectures on Clinical Surgery.* Vol. I. (*On Certain Rare Diseases of the Skin.*) By JONATHAN HUTCHINSON, F.R.C.S., Senior Surgeon to the London Hospital, etc. J. &. A. Churchill: 1879.

WE may say at once that this constitutes one of the golden books of practical medicine which

> "Apparent rari nantes
> In gurgite vasto"

of the mighty flood of literature perpetually streaming from the press. Its value consists not merely in the matter contained in it, but in its marvellous suggestiveness. And this is explained when we consider how it is made up. Mr Hutchinson's indefatigable energy in note-taking has enabled him to accumulate a storehouse of facts from which he has drawn in composing these lectures. Hence he gives no uncertain sound, no treacherous memory has to be relied on; but from clinical pictures, sketched by a master's hand, conclusions are arrived at, the worth of which is indisputable. No sounder or more valuable advice to students was ever given than by Dr Grainger Stewart in his introductory lecture to the class of practice of medicine in the University of Edinburgh at the beginning of the present winter session. He recommended the senior students to make "studies of cases, consisting of a narrative, with comments suggested by their own observation and reading." This is the commencement; the volume before us is a bright example of what such a habit can accomplish. It may be pleaded that the recording of notes of cases takes time, and so it does, and oftentimes much self-denial also; but the regret is not that the time was wasted, or the notes too full, but the reverse, when, a similar, perhaps an anxious case, recurring in practice, one would fain have something more definite to go on than the shadowy recollection of past experience. Then, notes taken at the time may be of inestimable value to refer to.

The first lecture gives an admirable description of molluscum contagiosum. In nothing, perhaps, has Mr Hutchinson been more happy than in pointing out the relationships of various skin diseases which at first sight seem widely separated; but while using some facts in acne to illustrate the pathology of molluscum, he tells us that it stands alone. Its contagiousness he does not for a moment doubt, and throws out the hint to inquirers after its cause that he believes this will be found to be a definite and special parasite, be that animal or vegetable. He records several cases where, occurring in the genitals, solitary tumours had been mistaken for a hard chancre. He does not allude to the "molluscum corpuscles," those starch, granule-like bodies found in the contents of the tumour by Henderson and Paterson. These are now looked on by Kaposi as "amyloid" bodies, arising from a transformation of epithelium which, under certain circumstances, has lain long incarcerated, as in old comedos, in the lung, etc. In the earliest stages, when not larger than pins' heads, Hutchinson believes that the tumours will rarely advance further if an ointment containing sulphur and ammoniated mercury be systematically rubbed into them. We tried this in a patient recently under our care, but it failed, while a tar ointment soon dispersed them. That it was not lichen ruber, which the molluscous growths in this instance rather closely simulated, was proved by a microscopic examination of one which was excised.

The other form of molluscum—molluscum fibrosum—is as ably treated in another lecture, the relationship being shown to be merely a nominal one, so that perhaps Fox's appellation, fibroma, is preferable. In a volume where every page is full of interest and suggestion, it is not easy to select, but to our mind one of the very best chapters is that devoted to morphœa. No term, perhaps, has been more disputed than this. Regarded by Wilson as the descendant and the representative, in our time, of anæsthetic leprosy, by Addison as a form of keloid, by Duhring as an atrophy, and by many as circumscribed scleroderma, Hutchinson very clearly shows that this last view is the correct one. The close analogy existing between morphœa and herpes zoster is used as a powerful argument for its neurotic origin, and this, again, rather favours Wilson's idea as to its ancestry. Its tendency after a long time to spontaneous cure may encourage more extended trial of the constant current in its treatment. Hutchinson, from his close observation of numerous examples extended over years, has satisfied himself, and will also his readers, that an amelioration amounting even to recovery does take place. Further, Mr Hutchinson proves that not only morphœa, but cicatricial keloid, the keloid of Alibert, generally disappears if we wait long enough, and the younger the patient the higher the probability of its doing so.

The author informs us that other volumes—on injuries of the head, on syphilis, on gout and rheumatism, on diseases of the eye, and a part devoted to miscellaneous topics—are in preparation. Their appearance will, we are sure, be hailed by all.

It is only necessary to add that this is a book which one can easily slip into one's pocket; it is therefore not a large book, and our advice to every medical man who wishes an intellectual treat, to be induced to think and reflect, and to add a work of permanent value to his library, is—*buy it.*

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*Clinical Lectures on Antiseptic Treatment of Wounds.* By Professor THIERSCH. New Sydenham Society. Vol. LXXI.

*On Treatment of Amputations by Open Method.* By FREDERICK S. DENNIS, M.D. *New York Medical Journal*, January 1876.

*On Antiseptic Treatment of Wounds.* By ROBERT F. WEIR, M.D. *New York Medical Journal*, January 1878.

*The Mortality of Surgical Operations.* By EDMUND ANDREWS, A.M., M.D. Assisted by THOMAS B. LACEY, M.D. Chicago. 1877.

AFTER the magnificent ovation given to Mr Lister at Amsterdam recently, it is almost unnecessary to remark on the opinions of surgeons generally as to the merits of the antiseptic method. Yet in reading lectures and essays such as those above noticed (selected from a number) we find various opinions recorded.

Professor Thiersch takes up Mr Lister's idea most warmly and thoroughly. Theoretically he finds Listerianism perfect. Yet he departs from it, and substitutes (as more convenient) a method of his own. He prefers salicylic acid to carbolic acid, as less irritating, odourless, and cheaper.

Dr Dennis, on the other hand, discards antiseptics, and recommends an "open method" which differs from any we have yet heard of, and certainly, of all methods of dressing amputations, most deserves the name "open." The method was introduced by Dr Wood, of the Bellevue Hospital, N.Y. It consists of doing nothing to the wound after the vessels are secured by ligatures. No sutures, straps, or dressing of any kind are applied to the flaps. They are left to hang naturally (the amputations being by long anterior and short posterior flaps), and the stump simply laid on a pillow of oakum, all discharge removed, and stump cleansed as frequently as necessary. As far as it goes, this system is perfection, as there have been no deaths. After the flaps have granulated they are approximated by strips of plaster.

Dr Weir approves of antiseptics, especially for compound fractures. He is a lover of statistics, and is disappointed that Mr Lister has never published an account of the success resulting in his own practice from the antiseptic dressings. We must say that it is very disappointing to lovers of figures that we cannot trace the effect produced on the mortality in Mr Lister's operations, by the various improvements and advances in the method of dressing which Mr Lister has developed year by year, from putty to lac plaster, from screen to spray, from simplicity to elaboration.

In the matter of statistics Dr Andrews' production would be a surfeit to any one. The main object in view seems to be a proof that the surgery of Western America is vastly in advance of the whole world. This is so truly American that we need not criticise it any more than we would Barnum.

*The Physical Examination of the Chest in Health and in Disease.* By REGINALD E. THOMSON, M.D., etc. London: Henry Renshaw: 1879.

So far as we can see, this book does not appear to be in any respect superior to many others on the same subject which the English language possesses. The arrangement is good, and the printing clear, particularly the headings of the different paragraphs, which are arranged to catch the eye readily. The diagrams are bold and effective. Beyond this, we can really say little in the way of praise. The work barely rises to the average level of such productions. To write a work on physical diagnosis in the present day requires no little courage, and he is a bold man who does so without a very thorough knowledge of the subject in all its bearings. That Dr Thomson possesses such accurate knowledge is hardly, we think, borne out in the work before us.

Let us take, for example, his account of the "clinical acoustics of percussion." He remarks that "the pulmonary resonance is derived from a number of little sacs containing air, and the exact sound elicited from them depends upon the tension of these sacs" (p. 47). The idea of the writer is not only expressed in a very clumsy manner, but is opposed to the usually accepted theory. Pulmonary resonance is derived not merely from the vibration of air in the air-cells of the lung, but also and very importantly from the vibration of the walls of these air-sacs and of the thoracic parieties. The pitch of the note depends upon the depth of the air-column beneath the pleximeter, and not, to any appreciable extent, at least, on the tension of the air in the air-cells *per se*. But it is really absurd to enter on such a discussion at this time of day. We can find no reason stated for the peculiar opinions held by the author. On the whole, it does not seem likely that this work will take a high place among those devoted to the physical examination of the chest.

## *Proceedings of the Grant College Medical Society of Bombay.*
February 1877 to February 1879.

In our last number we noticed the *Transactions* of the Grant College Medical Society, and now we wish to direct attention to its *Proceedings*. These *Proceedings* extend over a period of two years, and embrace a great variety of subjects. In the number for March 1877 there is a very interesting paper on "Leprosy and its Treatment by Gurjun Oil." He is not in favour of the treatment of leprosy by this oil. He says, "It acts as any other mild alterative, or any other balsamic substance, when assisted by proper hygienic measures, and frictions with any resinous soapy substance. It has the disadvantage of purging the patients, and reducing them considerably if long continued."

Mr Dadabhoy Jamasji, who has charge of the Prince of Wales' Hospital at Jamkhundy, has a very instructive paper on cases treated in that hospital, including cases of stone in the bladder, in one of which he performed the lateral operation of lithotomy successfully, although the patient had albuminuria. Mr C. F. Khory has a very interesting and instructive paper on "Causes of the more Dangerous Forms of Malarial Fevers in the Town and Island of Bombay, and Suggestions for their Prevention." He shows that during a period of five years, from 1871 to 1876, upwards of 30,000 persons died of fever in Bombay—about 35·7 per cent. of all the deaths. There is also an interesting paper on a "Congenital Cataract and its Treatment," by Mr Gama. To those who take an interest in sanitary matters, the paper of Assistant-Surgeon Ruttonji Hormasji on the "Sanitary Condition of the City of Ahmedabad for 1876" will be read with great interest and with much profit. Dr Blanc's paper "On the Treatment of Abscess of the Liver" is also a valuable communication. Assistant-Surgeon A. Rahim Hakim on the cure of serpents' bites, as well as the discussion which followed the reading of the paper, are well worth perusal. Mr Lisboa, the president, has a very interesting paper on the use of indigenous drugs in skin diseases. Various species of Cassia are used for the cure of ringworm. "The bruised leaves of these plants, or the bark of their roots, are mixed with honey or lime-juice, and applied to the part. Better than all these Cassias is *Rhinocanthus commonis*, the *gujkurna* plant; the bark of its root, mixed with lime-juice, cures the disease very rapidly." For *scabies* the natives use the oil of *Songamia glabra.* Another valuable plant used in *scabies* is *Thespesia populnea*, the yellow viscid juice of its fruit being applied to the parts after washing them with a decoction of the bark of the same plant. In cases of psora Mr Lisboa has found the oil of *Hydrocarpus inebriens* the best application. This oil, he adds, is useful in leprosy also, and stands next to chaulmogra in its efficacy. For cracking of the feet, a disease common in Southern India, Mr Lisboa recommends the use of the white glutinous juice of the *Ficus bengalensis* (banyan tree). Mr Temulji's paper on the "Nature and Treatment of the so-called Typho-remittent Fever of Bombay" is at once able and exhaustive. The last paper is a valedictory address by the president, Mr Lisboa, in which he gives a short summary of the papers read during the past year, and refers to the history and progress of the Society. In his able address the president pays a graceful and well-merited tribute to Dr C. Morehead, a name not less honoured and respected in Edinburgh than it is in India.

Mr Lisboa says:—"Dr Morehead, who is regarded as the pioneer of medical education in the Bombay Presidency, founded the Society in 1857, when the number of graduates of Grant Medical College were only eight; now they are 138. Dr Morehead worked in the Grant Medical College and in the adjoining hospital from the day of their opening until the last hour of his departure to Europe, after a sojourn of nearly thirty years in India. He put the whole machinery in such order that it worked well and smoothly from the beginning. He worked daily in the Jamsetjee Jeejeebhoy Hospital and Grant Medical College from 7 to 9.30 A.M., and from 1 to 6.30 P.M. (often later, and sometimes even at nights, whenever an urgent case in hospital required it), to the injury of his health, and to the great sacrifice of his private interests. He enjoyed, both amongst Europeans and natives, the reputation of being a sound and experienced physician."

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## *Phrenology Vindicated: a Reply to Dr Andrew Wilson.* By A. L. VAGO. London: Simpkin, Marshall, & Co.

DR ANDREW WILSON seems, by his article in the *Gentleman's Magazine* on "The Old Phrenology and the New," to have drawn down upon himself the usual nest of hornets. Mr Vago, as is usual with polemical phrenologists, begins his protest by assuming an entire ignorance of the brain functions and structure on the part of his opponents. A writer who says (p. 19) that "the physiology (?) of phrenology has been begged, borrowed, and stolen by the medical world on the one hand, and its philosophy unacknowledgedly (*sic*) assumed by the scientific world on the other," is an opponent upon whom it were worse than useless to waste words. Similarly, when Mr Vago denies (p. 24) that Development is any guide to the nature of living organs and structures, we may conceive of the author of this pamphlet as opposed to all sweetness, light, and argument from science.

### *On the Diseases of Animals which do not necessarily render them unfit for the Food of Man.* By F. VACHER.

DR VACHER of Birkenhead reprints this pamphlet from the *Sanitary Record.* It deals with a subject of extreme importance, and which necessarily raises the question whether a judicious conservation of meat, usually condemned as unfit for food, might not follow upon a scientific and further consideration of the effects of special diseases upon special animal tissues. Dr Vacher says that necessarily such diseases as cattle-plague, pleuro-pneumonia, sheep-pox, etc., being general diseases, unfit a whole carcase in every sense for being used as food. A second class of diseases exists, however, in which are included affections that, Dr Vacher holds, depreciate the quality of the meat and make it more liable to decomposition, but that at the same time do not, save in their later stages, render the meat utterly unsuitable for food. Such are foot-and-mouth disease, hoof-rot, tuberculosis, acute inflammatory diseases of lungs, intestines, and serous sacs, jaundice and cardiac dropsy, etc. Dr Vacher's third class includes such diseases as are absolutely innocuous in any stage, and which do not render the meat unfit for consumption. Such are (1) the presence of certain immature *Tæniada* (e.g., *Cysticercus tenuicollis,* the scolex of *Tænia marginata* of the dog) found in the peritoneum, etc., of sheep, oxen, and swine; (2) the presence of larval bot-flies (*Œstrus*) in the frontal sinuses; (3) *erythema ;* (4) *herpes circinatus* in cattle; (5) *pemphigus* in sheep and lambs, etc. The second class of Dr Vacher is really that concerning which discussion is needful. It should form an important inquiry with medical officers of health whether the further conservation of our food-supply in relation to disease and its effects might not be subjected to fresh and searching investigation.

# Part Third.

## MEETINGS OF SOCIETIES.

## MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

### SESSION LIX.—MEETING III.

*Wednesday, 7th January* 1880.—Dr P. H. Watson, *President, in the Chair.*

I. *Professor Sanders*, President, delivered his RETIRING ADDRESS, which will be found at p. 731 of this Journal, and then vacated the chair in favour of his successor in office, Dr P. H. Watson.

*Dr Watson* said, that in occupying the chair of the Society for the first time, he was sure that he acted only as their mouthpiece in expressing to the retiring President the grateful sense they entertained of the invaluable services he had conferred on the Society during his tenure of office. He had not only devoted a large portion of his valuable time in attending the meetings of the Society, but he had done much in arranging its business so as to ensure that the meetings should prove a success. Dr Watson thanked the Society for now conferring on himself the presidency.

II. *Mr Bell* showed a case of MOLLUSCUM FIBROSUM. The patient, a strong workman, 40 years of age, had been affected by this rare form of skin disease from infancy. He was brought under surgical treatment because certain of the tumours had somewhat rapidly attained a large size and become intensely painful. There was a pendulous tumour on the buttock as large as the hand, another large one on the chest, and two others on the forehead and occiput. The tumour on the buttock seemed to be not so pendulous as the others, and had not so broad a base, and its removal was first effected. It hardly bled at all. One of those on the head bled profusely, but the hæmorrhage was easily stopped. The other tumours, scattered all over the body, had diminished in size since the large ones were removed.

*Dr Jamieson* said that, as regards the pathology of the disease, it seemed to be a congenital condition. It commenced in the subcutaneous areolar tissue by a local hypertrophy, which eventually formed nodules covered by skin. These sometimes remained hard and solid, and at other times underwent atrophy, leaving the skin as a loose bag from which the contents had been withdrawn. The condition in which these bags were hanging on the body was called dermatolysis. It was peculiar that the patient suffered from similar tumours in the mouth. The name "molluscum fibrosum" was originally given to the disease from the idea that it resembled molluscum contagiosum. This latter affection arose in the sebaceous glands, and was a change of the glands themselves, while molluscum fibrosum was a real hypertrophy of the areolar tissue. He had met with one case resembling this very closely, having cutaneous cysts scattered over the body, but these, on being cut into, were found to contain a dark fluid—altered sebum—and were quite distinct from the tumours of molluscum fibrosum.

*Mr Bell* added that he had submitted the larger growth to Dr Hamilton, to see if he could find out why it was so painful.

III. *Dr James* showed an INSTRUMENT, the purpose of which was to demonstrate graphically the power possessed by an individual of co-ordinating the muscles concerned in the maintenance of the equilibrium. It consisted of a pair of pedals on which the individual stood. To these were attached receiving tambours, and these communicated any movement of the pedals to a pair of registering tambours. Tracings obtained from healthy and diseased cases (locomotor ataxy, chorea, etc.) were exhibited and described.

IV. *Dr Miller* exhibited the right temporal bone and cerebellum removed post-mortem from a boy who had had a discharge from the ear existing from infancy, and who had some months previous to death been struck behind the ear with a cricket-ball. While in hospital he was subject to comatose attacks, generally preceded by vomiting and intense pain. The discharge from the ear was intermittent, varying inversely with the amount of discharge from a sinus which had formed behind the ear. In the hospital the mastoid cells were opened into by chipping away the bone with a gouge and mallet, and a cavity in the bone was reached from which some pus came. The patient was remarkably well for a week afterwards, but the coma returned the day week of the operation. Thereafter he gradually sank and died. In the right half of the cerebellum there was found post-mortem a large abscess, which, however, had apparently no connexion with the disease in the ear. The opening made at the operation was found to communicate with the external surface of the dura mater, and a passage seemed to exist below the dura mater upwards and forwards, while another opening was found on the petrous part of the temporal bone, which communicated with the internal ear. At the operation the internal ear was probably tapped from the mastoid cells through the passage described.

V. *Dr James Young* communicated a paper by Dr Phillippo, Jamaica, on TETANUS and TRISMUS. The writer maintained, and adduced statistics to show, that hygienic causes are the principal factors that have to do with the prevalence of the disease. The paper contained also the detailed history of a case in which chloral had been administered with good effects, and in which, in the course of the treatment, strychnia had been given, but had aggravated the symptoms.

*Professor Sanders* remarked that it was unsatisfactory that there had not hitherto been success in the medicinal treatment of tetanus, and that the improved statistics of the disease at present were due, not to proper means of curing it, but to the rarer occurrence of cases.

*Professor Fraser* said the case which Dr Phillippo had favoured the Society with could not allow them to draw any very clear inference in regard to the therapeutic value of chloral. He could not, however, help thinking that chloral was perhaps one of the remedies they might look to with as much hope as to the other medicines at present suggested, if not with more hope. Although tetanus was a mere symptom of a great many morbid conditions, and could not be hoped to be treated by any one single remedy, still it was known that an essential character of tetanus was the excessive excitability of reflex centres; and it was further known that in the similar condition produced by strychnia, chloral had a power greater than that of any other remedy to reduce this reflex excitability. Chloral was therefore probably a good remedy. He inferred from the paper that tetanus, which was unusually prevalent in certain parts of the world—especially in tropical climates—was considered by the author to have not so much connexion with climatic as with hygienic conditions. In that relation he would mention that even when, in tropical climates, there was every reason to believe hygienic conditions to be exactly fulfilled, it was frequently found that tetanus occurred with exceptional prevalence. He thought that, notwithstanding the facts brought forward in this communication, they were not entitled to say that climatic conditions—especially a hot climate, or some concomitant present in hot climates—had nothing to do with the disease.

VI. *Dr W. Taylor* communicated a paper by Mr A. D. M'Donald on MENTHOLE as an antiseptic and antineuralgic agent.

*Professor Fraser* pointed out that all the essential oils possessed the action exemplified in Mr M'Donald's experiments with menthole. Menthole being almost the same substance as thymole, must possess the same actions, and they were both nothing else than camphors. If there were any merit or practical value in thymole or menthole, which were difficult to obain on account of their expense, it was worthy of consideration whether camphor, which was cheaply obtainable, could not be substituted for any of them.

*Dr Duncan* mentioned that he would be happy to give menthole a trial, so as to see whether its extreme volatility would make it valuable, as had been suggested in the paper, for the purpose of antiseptizing a wound already swarming with bacteria. The application of chloride of zinc and other antiseptics presently in use was no doubt exceedingly injurious to the tissues, and it would be an advantage if something less irritating could be got.

*Dr Miller* stated that he had used menthole for a few days in the case he had alluded to at an earlier stage of the meeting, by injecting it into the ear and applying it on the head. The discharge from the ear was decidedly improved, but the pain was not in the smallest degree relieved. With regard to Professor Fraser's remarks, Dr Miller said he had seen snuffing camphor do good in facial neuralgia, but the result was evanescent.

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## OBSTETRICAL SOCIETY OF EDINBURGH.

### SESSION XXXIX.—MEETING II.

*Wednesday, 26th November.*—Dr ANGUS MACDONALD, *President, in the Chair.*

I. *Professor Simpson* read NOTE ON METHOD OF CASE-TAKING IN GYNECOLOGY, which appears at page 673 of this Journal.

*The President* had been exceedingly interested in the paper, and would be glad to hear any observations or suggestions, as Dr S. had requested. He felt that the Society was deeply indebted to Dr Simpson for the care he had evidently taken in drawing out the card. Making up such a card was like drawing deductions from statistics—the labour, time, and thought could not fairly be estimated by the mere bulk of the work exhibited. The method described was an exceedingly good one to direct the student in his inquiries. He did not see his way to making on the spur of the moment any additions to this form, which undoubtedly supplied a felt want in the gynecological teaching of this School. Some of the methods of examination mentioned were, he thought, however, hardly suitable to be recommended as matters of course to the student. Thus he thought the "abdomino-vesical" method was too prominently put, seeing it was classed with the ordinary abdomino-vaginal one as if it were equally safe and necessary to a complete examination. It was a dangerous proceeding, as it might leave the patient in trouble from incontinence of urine, and it would therefore have been better had it been placed in a more subordinate position. He felt highly indebted to Dr Simpson for his present paper.

*Professor Simpson* thanked the Society for their reception of his paper. In reference to what Dr Macdonald had stated, he wished to remark that, just as when speaking of anamnesis he had said that all the points might not require investigation in every case, so under physical examination he had stated that the same held good. He was glad that the card met with the approbation of the Fellows. He did not present it as perfection or finality, but to get criticisms and additions for a future issue.

II. *Dr Underhill* then read his CASE OF DIPHTHERIA COMPLICATING PREGNANCY, which appears at page 714 of this Journal.

*Professor Simpson* felt that the Society was under obligation to Dr Underhill for his record of such a rare and interesting case. The result of a post-mortem examination would have increased its value, but they all knew that these were almost inadmissible in private practice. Happily diphtheria was not so common that they should meet with it in pregnancy, and therefore every case should be recorded. Dr Underhill believed it was not a complication apt to be associated with premature expulsion of the fœtus, but yet out of his two cases one aborted. He did not think Dr Underhill had fully estimated the cause of the onset of labour in his case. It was questionable whether it was due to an accumulation of carbonic acid in the blood, or to a morbid state of the blood in addition. Many obstetricians were disposed to consider uterine action as excited by the presence of carbonic acid in the blood. Most practitioners must have noticed that in lung diseases, such as pneumonia, they had a tendency to premature labour. They further knew that carbonic acid stimulated unstriped muscle; and all were aware of Brown Sequard's theory as to the accumulation of carbonic acid setting up uterine action. But in some febrile conditions of typhus, etc., we get uterine action before the fœtus dies. Here the blood is morbid, and there may be no extra amount of carbonic acid present. As regards the diseases bringing on abortion, cholera was said to be more favourable if abortion occurred. The real interpretation of this was, however, that in the cases where there was no abortion the disease was intense, and killed the mother soon. Then, again, in typhoid fever, where hæmorrhage, such as epistaxis, etc., was common, abortion was frequent, about 60 to 70 per cent. of pregnant women who have typhoid miscarrying, according to Kaminsky's statistics. They should therefore keep in mind a morbid state of the blood in Dr Underhill's case; and further, as the kidneys finally did not act, the blood would become still more poisoned. Cases like Dr Underhill's were rare, but they should be cautious in drawing conclusions. He had listened with great pleasure to the paper.

*Dr James Carmichael* thought Dr Underhill had done well in recording this case. He had had some experience of abortion in typhus and small-pox. When resident physician in the infirmary he had seen several hundred cases of typhus; of these three or four aborted. One woman, at the seventh month of pregnancy, did not abort, however, and ultimately was delivered at the full time. When practising in Burntisland, there was an epidemic of small-pox, but only two abortions occurred. He had always observed the labours were remarkably easy.

The *President* remarked on the interest of the case. Fortunately his experience of diphtheria in pregnancy was *nil*. He certainly could not imagine a more anxious and distressing case than the one Dr Underhill had just recorded. Conclusions as to the onset of labour in Dr Underhill's case were dangerous and difficult, all the more that they did not yet know what started normal labour, and consequently could not be expected to be able to define with accuracy the bearing of a particular lesion in inducing it. One of the latest views on this subject, and one which he had expected would have come out in this discussion, was that of Leopold, viz., that it was due to an accumulation of blood in the uterus charged with $CO_2$, owing to progressive thrombosis of the uterine and placental veins during the latter months of pregnancy. If this theory turned out to be true, it would lend support to Dr Underhill's view of the causation of labour in his case. The conclusions Dr Underhill had drawn as to the effect of diphtheria on pregnancy were not, however, very strongly borne out by his cases, as Dr Simpson had already shrewdly remarked. It was interesting to note that there was no diphtheritic endometritis in these cases, as one would have naturally expected. He had seen one case of typhoid fever at the fifth month of pregnancy, with a temperature as high as 103°, but the gestation was uninterrupted. He had previously read a paper to the Society, showing that they were too much afraid of abortion in these cases. While he was glad that his own experience in this complication of pregnancy was *nil*, and hoped it would remain so, he felt at the same time that it was of the highest importance, in order to help us to form correct views on these rare occurrences, that these cases, sad as they were, should be carefully reported. Only in that way could definite opinions regarding such complications be ever obtained.

*Dr Wilson* drew attention to the influence of relapsing fever on pregnancy. He remembered one case well where the patient aborted. When pregnant women took this fever, they usually aborted; and if so, they generally died. It was noteworthy in Dr Underhill's case how much tracheotomy relieved the patient.

*Dr George Dickson* had attended a case of semi-confluent small-pox where the patient went to the full time. He was unable to vaccinate the baby.

*Dr Underhill* thanked the Society for their reception of his paper. He wished to point out that he had guarded his conclusions, seeing they were based on only two cases. In the case specially recorded the patient was ill for seven days, and, but for the operation, would have died undelivered. He thought still that the diphtheritic poison had little to do with the labour, which was probably brought on by carbonic-acid poisoning.

# Part Fourth.

# PERISCOPE.

## MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY

By Angus Macdonald, M.D.

The Condition of the Cervix in the Non-Pregnant Uterus is the subject of a fresh paper by Bandl in the *Archiv für Gynäkologie,* bd. xiv. s. 237. After a somewhat prolonged historical review of opinions on the question of the relation of the lower uterine segment to the cervix uteri during pregnancy, the author proceeds to maintain that in the virgin uterus the cavity of the cervix, as indicated by the mucous membrane, extends much higher up than is the case with women who have borne children, being traceable to nearly the middle of the body of this organ; that during the first pregnancy the upper portion of that cervical cavity becomes gradually transformed into a portion of the body of the uterus, so as to amplify the lower uterine segment, its mucous membrane being changed into a true decidual membrane. Over this surface the ovum is adherent. In subsequent pregnancies the mucous membrane of this upper portion of the cervical cavity never regains the arrangement and characters of a cervical mucous membrane. According to Bandl, therefore, in the case of a woman who has borne children, what he calls the ring of Müller, which is ordinarily called the internal os uteri, is not the true internal os, but the lower extremity of this upper permanently transformed part of the cervix. The portion indicated is separated from the rest of the cavity of the body, he asserts, by a distinct narrowing of the uterine walls. According to Bandl, therefore, when the cervix is fully dilated during delivery the cavity which is ordinarily represented by the fully dilated cervix, as in Braune's plates, is not that part of the uterus bounded superiorly by the ring of Müller and inferiorly by the outer os, but this together with the altered upper portion. He maintains that the original inner os may always be detected, in the case of a woman who has borne children, high up above the the ring of Müller, and near the middle of the cavity of the body of the uterus. Some drawings are produced in support of this somewhat extraordinary view.

Are Dilatation Instruments necessary in Gynæcological Practice? is a question asked by Carl Schroeder in No. 26, *Centralblatt für Gynäkologie,* 1879, in reference especially to a paper in No. 25 of the same Journal by Fritsch, advocating rapid dilatation under chloroform with steel sounds of gradually increasing size, instead of sponge or tangle tents. Schroeder goes further, and would do away with dilatation in all cases. He proposes, in most cases where dilatation is ordinarily advised, to remove from the interior of the uterus, for examination, a small portion of the mucous membrane through the undilated cervix, by means of a sharp curette with appropriate long flexible handle. If found necessary, the hypertrophied mucous membrane may be entirely removed in this way. If it is really necessary to get the finger into the cavity of the uterus, Schroeder proposes to divide on both sides the vaginal portion of the cervix throughout its entire length, and then to pass the finger through the inner os, which in such cases is usually large, by forcible pressure of the index finger. Counter-extension is made either by pressure upon the fundus of the uterus, or by traction on the neck with a volsella. The incisions made in the vaginal portion of the cervix Schroeder unites by suture so soon as the necessary operative interference with the cavity of the uterus is effected. [It appears to us that few people will regard the advantages presented by the heroic methods either of Fritsch or of Schroeder superior to the ordinary method of slow dilatation by the use of tents.—A. M.]

A paper ON THE AMOUNT OF RED BLOOD CORPUSCLES IN PREGNANT WOMEN follows the above in No. 26, *Centralblatt für Gynäkologie,* by Dr Ingerslev, Copenhagen. In it, after a brief historical review of the opinions of Andral, Gavarret, Becquerel, Nasse, Spiegelberg, and others, the author records a series of observations made upon the blood of healthy pregnant and non-pregnant women, with Hayem's apparatus, in order to ascertain whether the red corpuscles were diminished or increased during pregnancy. Observations were also made upon the blood of young healthy males. The blood of ten healthy males, as many healthy non-pregnant females, and forty pregnant women without selection, was examined. The following are Dr Ingerslev's conclusions from his observations:—A marked diminution of the red blood corpuscles in pregnant women was not established by the observations. It is true the numbers were found somewhat smaller than in the case of the non-gravid. The proportion was, however, scarcely different from what the various external conditions might of themselves determine, without warranting us in regarding pregnancy as the deciding element. A manifest diminution in the amount of the blood corpuscles proportional to the advance of the pregnancy was far from being found as the rule. In so far as the amount of blood corpuscles in a given quantity of blood gives us a standard in the estimation of a hydræmia, according to these investigations it must be said of pregnant women that such a hydræmia is not established, since the lower numbers of the pregnant in comparison with those of the non-pregnant may be probably ascribed to the more unfavourable conditions of life of the former.

THE CONDITION OF THE BLOODVESSELS OF THE UTERUS AFTER THE OCCURRENCE OF DELIVERY is the subject of an important paper by

Dr Balin of Odessa, *Archiv für Gynäkologie*, bd. xv. s. 157, of which the following is the *resumé*:—(*a.*) One portion of the bloodvessels in the uterine substance is obliterated after delivery by growth of the connective tissue of the intima, whilst another portion continues to exist, and is only thereby very much narrowed; (*b.*) In the obliterated bloodvessels the media is destroyed by fatty degeneration of its muscular fibres; (*c.*) In the vessels that remain the media only partially disappears, and a substitute for the fattily degenerated muscular elements is obtained by new formation of smaller elements of the same kind; (*d.*) The fatty degeneration in the walls of the bloodvessels begins late, and proceeds more slowly than the same process in the muscular structure of the uterus; (*e.*) The process of obliteration mentioned under *a* is found especially in the large arteries of the middle and external vascular layers, and requires for its completion a period of several months; (*f.*) Many capillaries and newly-formed larger vessels with capillary walls are compressed by the contraction of the uterus after delivery, and are subjected at once, with the surrounding muscular tissue of the uterus, to fatty degeneration and absorption; (*g.*) The blood spaces in the placental area are closed by the thrombi.

MYXOMA ENCHONDROMATODES ARBORESCENS COLLI UTERI is the subject of a contribution of great interest by Dr George Rein of St Petersburg, *Archiv für Gynäkologie*, bd. xv. s. 187. The paper reports the history and treatment of a case presenting a form of disease hitherto unnoticed, although two analogous cases have been published—one by Thiede, which he calls papillar fibroma of the vaginal portion of the uterus; and another by Spiegelberg, under the name of sarcoma colli uteri hydropicum papillare. The disease in the present case was attached to both anterior and posterior lips of the cervix. It had an appearance extremely like a mass of uterine hydatids. The mass, when first seen, filled up and distended the vagina, but did not protrude through the hymen; but there was a history of a portion having been propelled through the hymen and having fallen off. Menorrhagia alternating with watery discharge was complained of, also intense constipation and painful micturition. The masses forming the tumour were partly twisted off and partly cut off by an ecraseur at two sittings, and the hæmorrhages from the surface of attachment arrested by the actual cautery. Part of the tumour was removed on the 5th of March 1875, and the rest of it on 10th, by Professor Krassowsky. The patient rapidly improved, and on 5th April left the hospital. But the disease soon returned, and she applied again for admittance on the 1st of September. On this occasion, in addition to the hydatid-like mass attached to what remained of the cervix, and which filled up the vagina, it was found that there was manifest tenderness, and an ill-defined tumour to be felt, on deep pressure, in the left hypogastrium. There were also observed, intermixed with the soft masses composing the tumour which filled the vagina, portions of cartilaginous hardness. On the 29th of September a third operation was performed for the removal of the tumour, as the distress from the stinking discharge and other symptoms was very great; but the patient died a few hours after the operation. It was found, on sectio, that the tumour had opened into the abdomen by penetrating the left broad ligament, so that some of the solution of perchloride of iron injected to arrest the hæmorrhage had passed directly into the peritoneum. Portions of the tumour removed at the second and third operations were subjected to careful microscopic examination by Professor Slavjansky, and were found to present a peculiar combination of the distinctive histological characters of myxoma and of medullary carcinoma. The general appearance of the tumour and its grape-bunch arrangement was also extremely like that which we perceive in a myxomatous chorion, whilst it is not seen in medullary cancer or in sarcoma. [The case is of extreme interest from its unique rarity, and deserves careful attention.—A. M.]

## MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh, School of Medicine, etc., etc.

Citrate of Caffein as a Sedative Anodyne and Diuretic.—Dr L. Shapter (*The Brain*, October 1879) directs attention to some new uses of the citrate of caffein. In advanced cases of cardiac disorder, where muscular embarrassment and neurosal inco-ordinate cardiac action with their consequences have to be met, the citrate of caffein, in doses of from three grains to five grains, may be looked to: (*a*) to induce co-ordinate action of the heart; (*b*) to increase vascular pressure, and promote free and almost instantaneous diuresis; and (*c*) to stimulate a heart gradually being relieved of its source of embarrassment to a more vigorous and forcible circulation. In these several ways the citrate of caffein is an important aid to the tonic action of digitalis, for unless the heat and circulation be relieved by it, or by diuretics or cathartics, tonic doses of digitalis will only make a further demand upon the embarrassed muscle to contract more forcibly upon its overloaded chambers. Caffein, by its diuretic virtues and its power of promoting equilibrium in the cardiac and general circulation, paves the way for the safe and efficient use of cardiac tonics. With such powers it is indicated in the melancholia of brain-workers, in the depression of spirits of drunkards, in asthenic mania, as well as in cases of heart disease.—*The Detroit Lancet*, December 1879.

Medical Use of Iodoform.—In the *Med. Central Zeitung*, September 13, Dr Lindeman makes the important observation, that balsam of Peru entirely conceals the odour of iodoform. Two parts of the balsam to one of iodoform are sufficient. In making an ointment or fluid application, the iodoform should first be rubbed up with the balsam, and the vehicle added. This latter, for an ointment, may be ung. petrolei; for a fluid preparation, glycerine or collodion, or alcohol. As—℞ Iodoformi, ʒj.; Balsami Peruviani, ʒij.; Unguenti petrolei, ℥j. M. For an ointment.—*Medical and Surgical Reporter*, December 27, 1879.

Iodoform and Quinia in Ulcers.—In foul ulcers, scrofulous sores, and sluggish wounds, Dr C. J. Williams (*Southern Practitioner*, November 1879) reports excellent results from the following:—℞ Quiniæ sulphatis, ʒj.; Iodoformi, gr. xx. M. Dust on the sore several times a day after a preliminary washing. —*Medical and Surgical Reporter*, December 20, 1879.

Hydrofluoric Acid in Diphtheria.—Mr Henry Bergeron has obtained very favourable results from inhalations of an atmosphere containing a definite small proportion of hydrofluoric acid gas. The quantity employed is one grain for each cubic metre (1·3 cubic yards) of air space in the room during three hours. The gas is generated by allowing the proper amount of acid slowly to evaporate from a vessel (of lead) placed on a table a short distance from the bed of the patient.—*Medical Press and Circular*, December 31, 1879.

Poisons and Antidotes.—In an interesting article on this subject by Dr F. A. Falck, which we find referred to in Schmidt's *Jahrbücher*, the writer points out that the so-called antagonism of opium and belladonna was noticed by Albinus and others as early as 1570. A real antagonism does not exist, according to Falck. His conclusions are as follows:—1, atropin is a true antidote for muscarin, but not the latter for the former; 2, duboisin is also a true antidote for muscarin; 3, atropin and duboisin are also antagonistic to pilocarpin. Atropin and physostigmin, strychnine and chloral hydrate, chloral hydrate and atropin, are all respectively antidotal in a pharmacological sense, but not in a physiological one. That is, the one will diminish the symptoms caused by the other, but will not produce contrary physiological effects.—*Medical and Surgical Reporter*, December 13, 1879.

## PERISCOPE OF OTOLOGY.

By Dr Kirk Duncanson, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

Note on the Treatment of Mucous Polypus of the Nose.—In some cases of polypus of the nose I have recently been adopting a treatment which has given good results. In structure these growths consist of but little more than connective tissue infiltrated with serum, and enclosed in something resembling mucous membrane. When removed by avulsion and exposed to the atmosphere, they rapidly shrivel by the escape of their serum, their distended grape-like appearance being exchanged in a short time for that represented by little more than a few shreds of connective tissue. The treatment to which I refer consists in freely puncturing these growths from the anterior nares by means of an ordinary acupuncture needle, thus allowing the fluid of which they largely consist to drain away. To prevent them from refilling, I follow this up by ordering the patient to inject into the nostrils a solution of carbolic acid and glycerine, which has a most marked drying-up effect, and to continue to do this daily and thoroughly for some time. In this way I have been able to deal successfully with some cases where the growths have been of a limited nature, and the patient averse to their avulsion. In the last case I made the puncture with one of Southey's trocars, which answered well, the serum escaping through the canula. I have thus, in treatment, regarded these as being local and limited œdemas rather than hypertrophies, and as being, when once emptied, curable by astringents. It is not always possible, from their position, to subject all these growths to puncture, otherwise I believe this plan would be found generally successful. (By Reginald Harrison, F.R.C.S., Surgeon to the Liverpool Royal Infirmary.—(*Brit. Med. Jour.*, 15th Nov. 1879, p. 773.

The Treatment of Mucous Polypus of the Nose.—I was much interested in Mr Reginald Harrison's "Note on the Treatment of Mucous Polypus of the Nose" (*see above*), as I have lately employed with considerable success a somewhat similar method. I have applied rectified spirit in the form of spray to the polypi. The immediate effect of this is to produce diminution in the size of the growths. In some instances the polypi have shrivelled up and disappeared altogether. This method of treatment was suggested to me by seeing two large polypi which I had put into spirit for preservation reduced in a few hours to half their original size. Mr Harrison's method of puncture seems to me admirable, and I shall in future employ it as a preliminary to the spirit spray in aggravated cases. (By A. G. Miller, F.R.C.S. Edin., Lecturer on Surgery, and Senior Assistant Surgeon to the Royal Infirmary, Edinburgh.)—*Brit. Med. Jour.*, 13th Dec. 1879, p. 938.

A Case of Ear-Sneezing.—An explanation of the prominent phenomenon in the following case—viz., the constant attacks of sneezing through two days and nights, occasioned apparently by acute inflammation of the middle ear—will be found in a short paper by Dr Lockhart Clarke on the Phenomena of Ear-Cough, in the number of the *British Medical Journal* for 15th Jan. 1870. Were argument needed for transferring the reasoning therein from the process of coughing to that of sneezing, the concluding sentence of that paper would afford it: "With regard to the anatomical connexion, and the mechanism by which I have shown that impressions made on the vagus and on the incident fibres of the trifacial and spinal nerves may call into action the whole class of respiratory muscles, see my memoir." It appears, also, that some sudden change within the cavity of the tympanum in my patient, a change followed by instant deafness, acted upon the heart through the inhibitory influence of the vagus, and produced fainting. It is also worth noting that there was no vertigo present, the labyrinth having probably escaped. I have commented on another occasion upon the distinction between vertigo and fainting, in connexion with a case of the so-called gastric vertigo.

A man, aged 56, of nervous temperament, an out-patient of the Birmingham General Hospital, was in his usual health a fortnight ago, when he was suddenly taken with "a kind of gaping and sneezing;" the gaping seemed to come from his heart. The sneezing was incessant during the next two days and night; "he could not tell the quantity of times he sneezed." At last, in the afternoon of the second day, after a dreadful sneezing fit, he tumbled down, and was unconscious for two or three minutes; on recovering he was completely deaf—so much so, that not knowing what had happened, and crossing the street soon afterwards, he narrowly escaped being knocked down by a passing vehicle. On the following afternoon he began to hear on the left side, but the sound seemed "to come the contrary way:" if from the front, it appeared to come from behind: if it started from one side of the street, it appeared to come from the opposite side. Ever since he has been "in agony" from a thumping through the ears, like a pulse beating very quickly, with a constant whizzing and a flutter in the ears. When the thumping ceased, "it was like a toothache behind the ears." He has not had any cough nor vertigo whatever. Dr Malet, our house-physician, examined the ears for me, and found the left ear full of wax; this having been removed, it appeared that both tympana were acutely inflamed at the attachment of the ossicles—the right very severely, being almost in a state of suppuration. After syringing, I found that the patient distinguished a faintly ticking watch only within three-quarters of an inch of his left ear; a loudly ticking watch at eight inches. On the right side he heard nothing, even when the watch was applied to the ear or to the cranium. (By James Russell, M.D., F.R.C.P., Physician to the Birmingham General Hospital.)—*British Medical Journal*, 13th December 1879, p. 937.

VERTIGO A TYMPANO LAESO.—Dr Bonnafont has recently addressed a note to the Académie des Sciences on the different forms of vertigo and nervous phenomena due to inflammation of the tympanic membrane and middle ear. He described a certain number of pathological conditions of the tympanum which produce nervous phenomena, which Flourens and Von Goltz attributed exclusively to the semicircular canals. Flourens taught that according as these canals are totally or partially divided, the animal submitted to operation turns to the right or to the left, or preserves its equilibrium, but appears to be seized with vertigo. According to Von Goltz, the semicircular canals are the principal organs of the sense of equilibrium of the head. Dr Bonnafont observed a great number of analogous phenomena, but which were determined by inflammation of the membrana tympani and of the middle ear, compression of this membrane from without inwards by hardened wax, polypi of the auditory canal, or by accumulation of mucus in the drum of the ear, causing a pressure on it from within outwards, communicating at the stapes, and from thence to the entire apparatus of the internal ear. All the patients suffered from vertigo, titubations, and sometimes even vomiting. None of them experienced the movement of rotation, but often want of equilibrium.—*Brit. Med. Jour.*, 27th December 1879, p. 1033.

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## OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

Observations on Alopecia Areata.—Professor H. Eichhorst of Göttingen, has in a case of alopecia areata, by a new means of investigation, discovered spores of a fungus in large quantity, which raises anew the question of its parasitic origin. The patient was a sawyer, aged 53, who suffered from aortic constriction and insufficiency, the result of rheumatism. A year before he came under observation bald patches appeared in the hair of the beard, and six months later on his head. The hairs set round the edges of the bald patches on the beard were as firmly fixed in their follicles as elsewhere, though when the disease began they came out easily. On the head, where the complaint was more recent, the peripheral hairs could be pulled out painlessly and without difficulty, while on more distant parts they were normally firm. Of the marginal hairs most of them came away without their root-sheath; in 10 per cent. the upper half of the root-sheath remained adherent, and these alone exhibited the changes to be described. These hairs were immersed for an hour in a 20 per cent. solution of caustic potash, an equal period in absolute alcohol, then for a similar time in a saturated solution of bismarck-brown, washed with absolute alcohol, and examined in dilute glycerine. These hairs, in the first place, removed from the neighbourhood of a patch, showed a part which corresponded to that occupying the upper two-thirds of the follicle, either but faintly or not at all stained, while a healthy hair was stained uniformly. This untinged part was markedly thinner, both than the rest of the hair, but also than the same part of an average normal hair. The explanation of these two facts was only made out by the employment of very high powers, (820–1250 d.) On such hairs as were accompanied by the root-sheath numbers of spores were found between the hair and root-sheath. These were round, from 3·5 to 4 mm. in diameter, some smaller, and many had a double contour. They were arranged in heaps and groups, some few had made their way outwards between the cells of the root-sheath, none penetrated into the hair, not a trace of mycelium could be discovered. The spores were only found on that part of the hair to which the root-sheath remained attached, direct observation gave no clue to their presence or not in the lower third of the hair follicle. The sole changes which the fungi had occasioned in the hairs consisted in a marked constriction (pressure-atrophy), and in a loss of capacity for their imbibing colouring material at these points, and this action of the spores was exhibited also on the hairs which came from the neighbourhood of the diseased area, though without their sheaths. The fungus itself bears, in Eichhorst's opinion, a closer connexion with that of tinea versicolor than with that of tinea tonsurans or favosa. He thinks that the insinuation of the fungous elements between the hair and its root-sheath loosened it and favoured its falling off. Whether all cases of alopecia areata are parasitic or not, must be settled by further observations on these lines, but it can no longer be denied that there is a parasitic form of the disease. Practically, therefore, in addition to local stimulation and constitutional tonics, we must avail ourselves of antiparasiticide remedies, all the more as such are good cutaneous irritants.—Virchow's *Archiv,* bd. lxxviii. heft 2, 1879.

HERPES OF THE GENITALS.—Dr Lande reports three cases of this affection, and offers the following comments upon its nature. He believes that it is not most commonly due to local irritation, but is a special disease analogous to zoster. The eruption is often preceded by neuralgic symptoms for a few hours, or even three or four days, the intensity of which is in no way proportionate to the extent of the former. The pain generally ceases with the appearance of the vesicles. The neuralgia is of three varieties—sciatic, testicular, and urethral; in women ovarian replaces testicular pain. (An argument against Lande's view is the markedly *recurrent* character of genital herpes, while true zoster seldom affects the same individual twice. With reference to the question of a local cause, Kaposi has recently remarked that many patients express themselves positively that constantly after coitus they are seized by an eruption of herpes. The compiler of this periscope would be glad of any suggestions or notes of cases of this singular affection, of which a summary would be published.)—*Jour. Méd. de Bordeaux,* 22d March 1879, and *Archiv of Dermatology,* July 1879.

CYSTICERCUS CELLULOSÆ AFFECTING THE SKIN.—Edward Schiff of Vienna gives an interesting account of a case of this extremely rare cutaneous disease. On various parts of the body of a strong man of 26 were numerous tumours, varying in size from a pea to a hazel-nut. These tumours were situated *under* the skin, in the subcutaneous areolar tissue, and between muscles. They were themselves movable on their base, and the skin covering them was so over them. Their consistence was rather difficult to define, for they felt gristly, combined with elasticity. Their surface was invariably smooth, and conveyed the impression that there was a tolerably hard cyst wall rendered tense from over distension. Excision enabled Chiari and Csoker to determine that the tumours were the scolices or larval forms of tænia solium. The first tumour appeared a year previously on the anterior margin of the right pectoralis major muscle, and then by degrees others showed themselves on different parts of the body. The man said that for about a year he had had repeatedly occasion to eat raw beef. Schiff thinks that some other accidental mode of introduction must have been active, since the larvæ of Tænia solium are never met with in oxen (?), but only those of Tænia mediocannellata, while the larvæ of the latter have not yet been observed in man. To strengthen this view, a strong anthelmintic brought away no segments of tapeworm. This patient also exhibited some curious nervous phenomena which are worth noting. Since the age of ten, when he had a severe attack of typhus fever, he suffered from a very intense tremor of the whole body, but especially of the upper limbs, presenting in course of years remissions and exacerbations. Besides this, synchronously with the appearance of the tumours under the skin, epileptiform convulsions came on with tonic and clonic spasms, affecting most severely the muscles of the nape of the neck, and preceded by an *aura epileptica*. Further, during the last year the patient often complained of uneasiness and pain over his whole body. The muscular tremor Schiff regards as a sequela of the typhus. The uneasiness, pain, and recurrent epileptic seizures, as identical with the symptoms of cysticercus of the brain, as described by Griesinger, ceasing for the time when each individual scolex became encysted, and thus lost its power of locomotion through the cerebral tissues, Schiff thinking with Lewin that thus the cysticercus migrates, and not merely, as Griesinger believes, advances along the course of the bloodvessels.—*Vierteljahresschrift für Dermatologie und Syphilis*, 2 und 3 heft, 1879.

## PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

A New Method of Performing Sclerotomy (*Annales d' Oculistique*, December 1879).—The great objection to the usual method of performing sclerotomy is the liability to prolapse of the iris, rendering it necessary frequently to convert the operation after all into one of iridectomy. Dr Martin of Cognac has been able to avoid this difficulty by operating in a new manner. As the prolapse is caused by the rapid evacuation of the aqueous humour producing a current which carries along with it the unstable tissue of the iris, it occurred to Dr Martin that the most important indication to be complied with was the emptying of the anterior chamber without lateral displacement of the pupil; this can be effected by allowing the aqueous to escape slowly before completing the incision. In order to do this the angle of the chamber is punctured with a paracentesis needle, and after the contents have escaped the aperture is enlarged with a pair of scissors. There still, however, remains the danger of prolapse taking place during the period of cicatrisation, as any bursting of the wound would permit of a more or less rapid escape of the contents of the anterior chamber, which, as we have seen, is the danger to be avoided. Dr Martin has therefore recourse to the reopening of the external angle of the incision once or twice during twenty-four hours for three or four days after the operation. In this way, by not allowing the anterior chamber to become definitely formed until after the organic union of nearly the whole length of the incision, whilst at the same time the tension of the eye is kept diminished, he has been able with certainty to avoid the occurrence of later prolapse.

THE PATHOLOGY OF NYSTAGMUS.—Hermann Wilbrand (*Klin. Monatsbl. f. Augenh.*), vol. xvii. pp. 419 and 461.—The experiments of Vulpian, Hitzig, Goltz, and especially of Ferrier, have shown that nystagmus can be produced by the excitation of certain portions of the gyrus angularis, the optic lobes, the floor of the fourth ventricle and aqueduct of Sylvius, and different parts of the surface of the cerebellum; also by disturbing the equilibrium of the cerebral ganglia and cerebellum by excitation or destruction of the centripetal fibres connected with them, viz., the crus cerebelli ad pontem, corpus restiforme, semicircular canals, retina, fifth nerve, etc. The following conditions can therefore be supposed to favour the occurrence of nystagmus:—(1), The centre for voluntary movement of the eyes (situated, according to Ferrier, in the gyrus supramarginalis and angularis) has not attained its full development; (2), its functions are suppressed, or its communications weakened or abolished; (3), the conditions one and two may be combined. The author has brought together a large number of cases in which the disease or accident which has been accompanied or followed by nystagmus may be supposed to have produced it by satisfying one of the above conditions. That is, when the relation between the voluntary and reflex centres of movement has been disturbed by some cause producing either excitation of the latter or diminution in the activity of the former, nystagmus is the result.

TETANUS PRODUCED BY THE PRESENCE OF A FOREIGN BODY IN THE CONJUNCTIVAL SAC.—Dr Samelsohn of Cologne records (*Centralbl. f. Augenh.*, November 1879) an extraordinary case of tetanus supervening on the irritation produced by a small piece of wood which had become lodged in the conjunctival sac. The spasms, which began in the eyelid passed after some days to the other facial muscles of the same side, and eventually included the muscles of the trunk and both lower extremities, so that six days after the extraction of the foreign body the patient was in a state of complete general tetanus. When he first presented himself, pressure over the points of entrance of the supra and infra-orbital nerves seemed to Dr Samelsohn to diminish the blepharospasm, and he accordingly suggested neurotomy, to which, however, the patient did not give his consent. The same pressure had no effect after the tetanus had become fully developed, and the prognosis was for some time doubtful. The patient, however, slowly recovered, the tetanic contractions disappearing in the reverse order of their appearance.

EXPERIMENTS ON BLINDNESS PRODUCED BY PRESSURE.—A great many experiments have been adduced lately by Boll, Kühne, Ewald, and others, in support of the theory that retinal excitation is of a photochemical nature. In the last number of *Pflügers Archives*, p. 614, Professor Exner describes some phenomena which he considers can only be explained by supposing that there exists in the retina a supply of a sensitive substance acted on by light, which is constantly being replaced from the blood as it is used. The following are the more important of Exner's experiments:—1. If the field of vision be divided into a white and black half, and a point fixed on the line of intersection, whilst at the same time pressure be applied to the eye until the white half becomes almost completely dark, it is found that if a white substance be then presented to the black half of the field it appears of normal intensity, gradually losing its brightness as the fixation is prolonged. 2. If an object be fixed for some time, it will, as is well known, give rise to an after-image, the duration of which depends partly on the brightness of the object and partly on other circumstances which are well known. If, however, the object be fixed whilst the eye is subjected to pressure, the duration of the after-image is greatly diminished, and, if sufficient pressure has been employed, ceases to appear at all. It must be remembered that such experiments are not absolutely free from danger. Care must especially be taken not to release the pressure too suddenly.

ON ENERVATION OF THE EYEBALL (*Annales d'Oculistique*, Dec. 1879).—The idea of substituting the division of the ciliary and optic nerves for enucleation, as a precaution against sympathetic ophthalmia or for the relief of pain, has several times been mooted. Thus, in 1866, V. Græfe proposed the intraocular division of the ciliary nerves, and in 1867 the extraocular division of the optic nerve. This subject has, however, received more consideration lately, and can be said to have entered upon a new phase since its reintroduction in 1876 by Boucheron. Boucheron was probably the first to operate according to a method suggested ten years previously by Rondeau, viz., by the simultaneous division, at the posterior pole of the eye, of the ciliary and optic nerves. His case appears, however, not to have been successful. Schœler presented several successful cases before the Medical Society in Berlin in 1877, and since then enervation has been performed by Abadie, Chisholm, Boucheron, and others, so that up to the present time thirty-six cases have been recorded in all. The operation as first performed by Boucheron consisted in opening the conjunctiva and capsule of Tenon between the superior and external rectus, at a distance of about one centimètre from the cornea. Then, by forcibly drawing the eyeball forward with forceps, the optic nerve is put on the stretch, and can be cut, along with the ciliary nerves and vessels, by passing curved scissors between the capsule and the sclerotic. An important modification is made by Schoeler. By separating the tendon of the rectus externus from its attachment much more room is obtained, and it is possible to satisfy one's self of the complete division of all the nerves, besides which a freer channel is provided for the hæmorrhage. Some less important modifications have been introduced by others who have done this operation. Warlmont, the author of the paper before us, also gives an account of his own method. Enervation appears not to influence the vitality of the eye. This operation could, of course, only be useful in some of the cases in which enucleation would otherwise be resorted to, although some of its advocates would appear to give it the preference in almost every case. A point naturally suggesting itself is the probability of reunion taking place between the cut ends of the nerves with more or less re-establish- of their functions. On this subject, however, Warlmont is silent. Further statistics, especially with reference to the after history of such cases, are necessary before general confidence could be placed in enervation.

Elephantiasis of the Upper Lid.—A case of this exceedingly rare affection, from the surgical clinic at Göttingen, is described and figured by Dr Walzberg (in the *Klin. Monatsbl. f. Augenh.*, vol. xvii. p. 439). The patient, a woman, aged twenty-seven, was born with a slight hypertrophy of the upper lid of the left eye. After some time this was subject to intercurrent inflammations, which caused it gradually to increase in size until it reached the angle of the mouth. During the intervals of the inflammatory attacks it appears to have been subject to no noticeable increase in size. The eye was amaurotic. Curiously enough, there was a similar tumour on the right eye. The tumour of the lid was successfully removed by Professor König, although the hæmorrhage was excessive. On microscopic examination it was found to consist of very cellular connective tissue, with abundance of elastic fibres.

On Myopia (*Ophth. Hosp. Rep.*, vol. ix. part 3, p. 345).—Ophthalmologists have until recently been rather in the habit of looking upon myopia as a disease *sui generis.* This, we doubt not, has been greatly owing to the weight of Donders' authority. In his *Anomalies of Refraction and Accommodation* Donders states that the myopic eye, unlike the hypermetropic one, must be looked upon as a diseased eye. To the coexistence of staphyloma posticum and myopic refraction undue significance has certainly been ascribed; one way in which the retina comes gradually to fall further and further behind the principal focus of the dioptric media, a condition resulting from pathological changes, has been taken rather exclusively to represent the etiology of myopia. Dr Landolt of Paris points out the importance of looking upon myopia merely as an abnormal state of refraction, a "disproportion between the refractive power and the length of the eye." According to calculation, a difference in the length of one mm. intervening between the retina and the focus of the dioptric media produces a myopia of 3·3 dioptres. What we have to explain is the cause of the disproportion between the length and refraction in any case. Landolt recognises three causes: (1.) The eye is perfectly sound functionally and anatomically, but only it is too long. "There is nothing surprising in this if we consider the slight increase in length required to produce myopia and if we further consider that there exists a much greater number of eyes in which, independently of any morbid cause, the focus is situated behind the retina." These cases do not present themselves so frequently to the oculist, as they have a great facility in selecting for themselves the glass which exactly corrects their refraction. (2.) Myopia due to spasm of the ciliary muscle, generally met with in young people. *Symptoms*—Asthenopia; want of precision in choosing glasses; small amplitude of accommodation. Ophthalmoscopic examination reveals lower degree of myopia, emmetropia, or even hypermetropia. These cases can be cured by enforcing the relaxation of the ciliary muscle with atropine. (3.) Myopia produced by choroiditis, thinning of the sclerotic which participates in the disease of the choroid, and consequent elongation of the axis from diminished resistance. Unfortunately no statistics of the relative heredity in the different cases are given.

# Part Fifth.

## MEDICAL NEWS.

FROM our able contemporary *The Philadelphia Medical Times*, of 6th December 1879, we extract the following kindly notice:—THE NEW EDINBURGH INFIRMARY.—The completion of the Edinburgh Royal Infirmary adds to the long list of the world's great hospitals a building which is probably the finest of them all. It was in 1725 that the first steps were taken towards the establishment of an infirmary in the city of Edinburgh. From various sources the sum of ten thousand dollars having been obtained, in 1729 a small house was opened, and during the following year succour was extended to thirty-five patients. In 1738 the corner-stone was laid of the east wing of the building at present occupied. As is well known, the institution is practically a portion of the University of Edinburgh. The two hundred and twenty-eight beds to which the hospital has gradually grown have long been insufficient for the demands of charity, and also of clinical teaching; so that about twelve years ago a determined effort was entered upon to obtain funds to erect much larger buildings. The success crowning these efforts is shown by the present magnificent structure, which has been erected at the cost of about one million seven hundred thousand dollars, including the money paid for its eleven and a half acres of grounds. The plan of the infirmary is that of three-story pavilions, the medical and surgical portions being entirely distinct one from another. No possible expense seems to have been spared in the fitting up of the hospital, as is at once shown by a comparison of the number of beds (two hundred and seventy-six medical, two hundred and ninety-five surgical) with the cost of erection. The operating, pathological, and other clinical theatres are especially well spoken of. By the use of impervious paints and varnishes, the attempt has been made to render the floors and walls absolutely non-absorbent. It is stated that there have been two hundred and fifty thousand yards, or about fifty-one acres, of painting. No medical institution in the world is more famous for the practical skill of its alumni than is the University of Edinburgh, and we doubt not that the good effects of the increased clinical opportunities will be seen not only in the numbers of the attending classes, but also in the continuing and increasing skill of the future alumni.

## CORRESPONDENCE.

*To the Editor of the Edinburgh Medical Journal.*

Palmer House, Chicago, *November* 27, 1879.

Dear Sir,—A friend in London has sent me an extract from your paper, in which the following appears:—"Having been pressed by the friends of an unfortunate drunkard to try this remedy [the bark cure], we administered it exactly as directed. . . . Our patient visited us some time after his convalescence with a powerful odour of alcohol about him, and we have ascertained from his friends that he is pretty much what he was."

Now, my dear sir, you administered *what?* The cinchona rubra preparation as made by me, or the ordinary drug-store tincture, made from common, cheap bark? And *how* did you administer it? As I do? Presumably not. Scientific minds investigate before they venture an opinion, which is something *you did not do*; for, had you done so, you would have been convinced that cinchona rubra extract, as I prepare it, *will cure*. Why? Is it not a tonic? Is it not a *cumulative tonic*, one that acts as its own antidote? Will you stake the reputation of your *Journal*, and give it as your opinion that this medicine of mine will not only cure the desire for alcohol stimulants, but create in the system an abhorrence for them? If so, publish this letter, with your views as an addenda, and I will furnish the remedy gratis, and cure the worst drunkard in Scotland—take him a besotted wreck, and restore him to rosy health; in a word, make a normal creature out of the abnormal one.

This test to be made before any committee of Edinburgh's responsible people, and the medicine administered according to my direction by any responsible M.D.

If I do not succeed, then condemn, but do not condemn until a fair test has been made.

Cinchona takes the place of the alcohol, strengthens up the digestive apparatus, builds up the shattered pneumogastric nerve-centre, and *then* its anti-periodic property prevents the system from falling back into that morbid condition which induces a desire for artificial stimulation.

I know whereof I speak, having during twenty-four months cured more than 4600 of the worst sots the United States could furnish, besides several in Glasgow, Aberdeen, Dublin, London, Rome, Milan, Berlin, St Petersburg, and other centres.

I write this in all good faith, and am very sure of one thing, viz., that every medical college on this globe will, sooner or later, teach the doctrine that a *non-cumulative* spirit can be displaced by a *cumulative one*, and that the action of cinchona in cases of dipsomania is full proof of it.—Respectfully, etc.,

R. D. UNGER, M.D.

## PUBLICATIONS RECEIVED.

Bericht über die Zwölfte Versammlung der Ophthalmologischen Gesellschaft. Heidelberg, 1879. F. Enke, Stuttgart, 1879.

W. BRAITHWAITE, M.D., and JAMES BRAITHWAITE, M.D., — Retrospect of Medicine. Vol. LXXX. Simpkin, Marshall, & Co., London, 1880.

HENRY C. BURDETT,—Pay Hospitals and Paying Wards throughout the World. J. &. A. Churchill, London, 1879.

R. B. CARTER, F.R.C.S.,—Eyesight; Good and Bad. Macmillan & Co., Lond., 1880.

WM. DARLING, M.D.,—Anatomography, or Graphic Anatomy. Baillière, Tindall, & Cox, London, 1880.

GEO. HENRY FOX, A.M., M.D., —Photographic Illustrations of Skin Diseases. Parts I.-IV. E. B. Treat, New York, 1879

BERKELEY HILL,—The Essentials of Bandaging. 4th edition. Smith, Elder, & Co., London, 1880.

Dr H.-C. LOMBARD,—Traité de Climatologie Médicale. Baillière, Tindall, & Cox, London, 1880.

J. S. LOMBARD, M.D.,—Regional Temperature of the Head. H. K. Lewis, London, 1879.

Medical and Surgical History of the War of the Rebellion in the United States. Washington, 1879.

RICHARD METCALFE,—Hot Air *versus* Hot Water Baths for the Working Classes. London National Temperance League, 1880.

JOHN TATHAM, M.D.,—Tenth Annual Report of the Health of Salford.

Transactions of the American Ophthalmological Society, 1879. New York, 1879.

Transactions of the American Otological Society. Vol. II. Part 3. Boston, 1879.

Transactions of the Pathological Society of London. Vol. XXX. Lond., 1879.

Dr A. TRUMET DE FONTARCE,—Pathologie clinique du grand sympathique. Baillière, Tindall, & Cox, London, 1880.

The Pocket Gray; or, Anatomist's Vade-Mecum. Baillière, Tindall, & Cox., London, 1880.

# Part First.

## ORIGINAL COMMUNICATIONS.

### ARTICLE I.—*On Intrauterine Puerperal Coagula.* By J. MATTHEWS DUNCAN, M.D.

(*Read before the Obstetrical Society of Edinburgh,* 14*th January* 1880.)

PUERPERAL coagula differ from menstrual coagula essentially in the time of their occurrence. Menstrual coagula may occur at any time during the child-bearing period of life remote from childbirth or abortion. Puerperal coagula occur only in the period called that of the puerperal state, which is easily limited on one side by the childbirth or abortion, uncertainly limited on the other side. This other limit is the period of the return of the uterus to its healthy unimpregnated condition, and into a nice discussion of it I do not enter, satisfying myself by allowing an interval of six weeks from childbirth or abortion to elapse before the puerperal state is probably quite passed.

The peculiarities of puerperal coagula which I propose to illustrate are their size, the liability of the uterus to increase in capacity as if with a view to contain them, the liability to hæmorrhage while they remain in utero, and the liability of the clot to form and maintain connexion with the uterus and become a polypus.

It is evident from even a superficial study or a small experience, that the liability to dilatation of the uterus increases with the nearness of the bleeding or formation of the clot to the childbirth or abortion; and that the danger is greater in a like proportion.

On the soft and often adherent clots and the rapid dilatations of post-partum hæmorrhage this is not the place to enter. That serious and too familiar accident is limited to a period comprised by, at most, the few hours immediately following delivery or abortion. When bleeding occurs later, it is generally called secondary hæmorrhage. Although this distinction is more or less formally and precisely made, it is justified almost exclusively by the rarity and less danger of the secondary hæmorrhage as contrasted with the frequency and greater peril of ordinary post-partum flooding. There is no essential distinction between primary and secondary hæmorrhage, so far as I know. There is no time in the puerperal state when a woman is safe from perilous hæmorrhage. There is no time in the puerperal state when a woman is safe from expansion or dilatation of the uterus and its attendant dangers. The subjects of puerperal clots and hæmorrhage in the puerperal state, although different, are so german to one another as to justify the introduction of these remarks on what is called secondary hæmorrhage.

Primary intrauterine clots of childbirth or abortion are frequently retained for a few days, become firm from draining off of serum, and are then expelled with slight or severe after pains. Such clots are generally so soft and broken as to retain little of the shape of the uterus. All this requires no proof; it is an occurrence familiar to the practitioner, and were proof required it could be easily produced. In passing, reference may be made to John Ramsbotham's[1] chapter on relaxation of the uterus after delivery, and its subsequent enlargement.

In describing puerperal coagula, I shall divide them into two kinds,—first, those discharged from uteri which have not been dilated to an extraordinary size in order to accommodate them; second, those in which the uteri have become dilated just as they become dilated after contraction in post-partum hæmorrhage.

The puerperal coagula which form and are retained in the puerperal uterus not specially dilated vary in size according to the time at which they are formed, being larger, of course, the nearer in time to the childbirth or abortion. Hæmorrhage may occur while they are retained, without displacing them.[2] They may be discharged entire, or they may break down and pass as brownish *débris* in lochial fluid.

"A not uncommon cause of secondary uterine hæmorrhage," says M'Clintock,[3] "is the retention of a coagulum, or of a portion of the placenta or membranes. A coagulum of any size is not apt to be found in the womb beyond the first few hours after delivery, as a very moderate degree of uterine action would be sufficient to expel it or to prevent its formation. Should it occur, however,—and experience abundantly proves that it may,—there will be a constant risk of hæmorrhage so long as the clot remains in utero. No doubt, the hæmorrhage in these cases is apt to go on continuously after the expulsion of the placenta, even with a tolerably firm contraction of the uterus, as Dr Ramsbotham has well shown. But on other occasions there is an intermission in the hæmorrhage, and it may not come on for hours or days after delivery. Thus, a woman had frequently recurring attacks of hæmorrhage during the ten days following delivery, until at length, the loss becoming dangerous and her strength much reduced, 'the hand was passed into the vagina, and the fingers introduced into the uterus, by which means some coagula were removed and the discharge ceased' (Collins)."

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[1] *Practical Observations in Midwifery*, 2d edition, 1842. [2] *Ibid.*

[3] *Clinical Memoirs on Diseases of Women*, p. 334.

Of the formation and long retention of a large clot the following case is an example:—

Mrs Y. H., a young recently married lady, was confined of twins at the end of the seventh month of pregnancy. Both children soon died. There was considerable and rather long-continued hæmorrhage post-partum, and the uterus was not brought, even at last, to firm, cricket-ball-like hardness of contraction. Her recovery was on the whole satisfactory, but the lochial discharge persisted of red tint. On the 19th, 20th, and 21st days of lying-in there was considerable secondary hæmorrhage, treated by ergot. On the 21st the discharge was chiefly red serum. During these days the uterus was felt to be bulky, but its size was not specially noted. The cervix uteri was patulous, but not open or dilated. On the 22d day after delivery a large clot came away. It had the shape of the uterine cavity, being rounded in all its outlines, and it measured 3 inches in greatest breadth, and 3½ in length from the part corresponding to the fundus uteri to the part corresponding to the internal os uteri. Below this part the clot was soft and broken. It had points indicating the position of the opening of the Fallopian tubes. Over the whole surface of its lower parts it was partially decolorized in the fretted style well depicted by M'Clintock; and on its upper part corresponding to the fundus the decolorized layer was dense and covering the whole surface. In the fundus of the clot a lacerated aperture was observed which easily admitted the finger, and which was presently accounted for. The bleeding was nearly, but not completely, arrested on the discharge of the clot. Five days afterwards, on re-examination, I discovered a fibrinous polypus and removed it. It had firm adhesion high up in the uterus. Its structure was of the ordinary kind, decolorized on the surface. It was of the size of a chestnut, and had chorionic structures in its pedicle. There could now be no doubt that the hæmorrhage flowed around the old clot, which was probably nearly as old as the polypus. It was not so old, for it had been formed around the polypus, and its displacement from the polypus which it surrounded left the lacerated opening in the clot which was observed at the time of the discharge of the latter, but was then thought to be accidental.

In his memoir[1] on polypus of the uterus, Dr M'Clintock relates a case. "In proof," says he, "that a coagulum may be formed in the uterine cavity soon after parturition, and be retained there for a considerable time before being discharged, I may mention the following case which fell under my notice last spring, when temporarily in charge of the Lying-in Hospital for Dr Denham

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[1] *Clinical Memoirs on Diseases of Women*, p. 191.

Dr J. R. Kirkpatrick was good enough to furnish me with the particulars, of which the following outline will suffice:—A young woman was delivered naturally of her first child the 19th February. Twenty-four days afterwards there passed from the vagina, without pain or any considerable bloody discharge, a very dense, firm coagulum representing an exact mould or cast, even to the Fallopian orifices, of the uterine cavity. The annexed woodcut shows its size and shape. Externally it had a mottled, dark-red and black colour, and towards the centre it was of a lighter shade of red, and not quite so compact in structure. It presented no sign of decomposition. She had not shown any uterine symptoms from the time of delivery."

In the two cases just given, the intrauterine puerperal clots were old and partially decolorized, not putrid. A case is referred to by M'Clintock[1] as narrated by Lachapelle[2] which, although not quite satisfactory in its details, seems to show that such clots may, instead of growing hard and decolorized, become putrid. "Another interesting remark," says Lachapelle, "which this observation may furnish us, is the return of the hæmorrhage at so late a period, without our being able to attribute it to any other cause than the presence of two somewhat voluminous clots, whose fetidity proved their age." The patient had been delivered, at the full time, of twins. The labour was tedious. The membranes were ruptured after about twenty hours of pains, and the first child was soon born. The second soon followed, and then a bilobed placenta. Severe hæmorrhage followed and continued for five hours, uterine inertia being at last dispelled by injections of cold water. The woman did well till the eighth day, when she got up, and then a little blood flowed. Hæmorrhage continued, although the woman was put to bed, till two fetid clots were discharged. The woman was taken with shiverings, vomiting, fever, etc., and died the following day.

In cases of ordinary secondary hæmorrhage it is not rare to find the uterus relaxed and full of soft clots; and it is often recommended and practised to remove these clots, in order to facilitate or secure uterine contraction and retraction. Examples of this are not rare in practice. Sometimes such cases are fatal, and then the clots, often adherent, may be observed in autopsy. Cases are related by Collins, Ingleby, Ashwell, M'Clintock, and several references may be found in my paper on the introduction of the carbolized hand into the uterus at long periods after delivery.[3] All such cases are regarded justly as rather cases of hæmorrhage than of clots, just as in the analogous post-partum hæmorrhage.

There is another class of cases of great importance, mention of which cannot be omitted, where, in consequence of the retention in utero of some adherent ovuline structure, the involution of the uterus is retarded in a remarkable degree, or completely arrested, till the adherent mass is removed, and then involution again makes progress. Of such occurrences I have recently seen several striking examples, where the still retained mass was very small, not bigger than a small hazel-nut, yet where involution was arrested for weeks or months, and when hæmorrhage had proved almost fatal. In such I have removed firm old but not decolorized clots. Such clots do not interfere with the hæmorrhage, seeming, indeed, to encourage it; and they are often discharged with more or less pain, new ones being formed in the place of the former. I shall not relate the particulars of any such case, but only refer to one which I published [1] lately.

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[1] *Clinical Memoirs on Diseases of Women*, p. 334.

[2] *Pratique des Accouchemens*, tom. ii. p. 474.

[3] *British Medical Journal*, Oct. 27, 1877, p. 583.

I cannot advance to the subject of fibrinous polypus without making special remarks on a case of M'Clintock's [2] which he, indeed, calls a fibrinous polypus, but which cannot be regarded as truly such. For he describes the tumour as "not seeming to have any attachment to the uterus, but simply retained by the constriction of the os." The case, then, is very rare, if not unique, and deserves quotation at length, being an unattached decolorized puerperal clot resembling a fibrinous polypus, except that it was unattached and contained no ovuline structure. It is right to note M'Clintock's tone of caution, which justifies the remark that the case is not quite conclusive as it stands. "A married woman, aged 35 years, applied at the Lying-in Hospital dispensary, in the month of September 1861, on account of frequently recurring bloody discharges from the vagina. These had been going on for three months, but were at no time very profuse in quantity. On making an internal examination I found the os uteri open, and a soft fleshy substance, which had all the feel of an ovum, protruding from it. With the aid of a volsellum I drew it away. This was effected without the use of force, the tumour not seeming to have any attachment to the uterus, but simply retained by the constriction of the os. The body so removed was totally devoid of fœtor, and was about the size of a large hen egg, but more elongated, and pointed at the ends. It was tolerably firm, but could be cut with a blunt instrument such as a spatula. Its exterior was of a reddish-yellow colour, and within it was apparently composed of coagulated blood. It contained no vestige of a distinct membrane, nor any structure properly belonging to the ovum. This woman had had an abortion or a premature labour (I forget which) about four months previously."

Into the whole subject of true fibrinous polypus I do not propose to enter. Many such cases have come under my observation. They all occurred in connexion with recent pregnancy, and were the cause of continued loss of blood, sometimes copious, sometimes inconsiderable. They were all easily cured by removal of the polypus.

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[1] *Clinical Lectures delivered in St Bartholomew's Hospital*, 1879, p. 3.

[2] *Clinical Memoirs on Diseases of Women*, p. 190.

In all there were ovuline structures in the pedicle or near the attachment of the mass. In most the shape was polypus-like, and the body of the polypus lay in the dilated cervix uteri. In one, already related in this paper, the polypus was within the body of the uterus. In one case the polypus had not the shape of a pear, but was largest at its broad insertion, smallest at its intra-cervical portion; it followed an abortion, and was recent, being scarcely decolorized on its external surface.

In his original writing [1] on fibrinous polypus, Kiwisch, as is well known, thought it probable that the uterus was relaxed, and enlarged or dilated, in order to contain it. His view has been generally rejected, and it is to be remembered that he was writing the first lines penned on the subject, and in ignorance that such polypi were observed only in women who had recently been pregnant. Dilatation of the uterus will be admitted to be easier, and therefore more probable, in a uterus which has recently been pregnant than in one not in the puerperal or lately emptied condition; and I know no good reason for positively denying that such dilatation of the cavity of the body of the uterus ever takes place.

But it is important to remark that we have no clinical evidence that, in order to contain a fibrinous polypus, the cavity of the body of the uterus undergoes special dilatation. It is, indeed, in consequence of its recent repletion in pregnancy, already in a dilated condition. The structure of such polypi and their history show that they are generally, if not invariably, formed of one attached clot, which shrinks and hardens as it undergoes decolorization, and is generally expelled from the cavity of the uterus proper and lodged in that of the cervix, so far as its body is concerned, while its stalk in the proper uterine cavity maintains the connexion of the body of the polypus with its attachment.

I come now to consider the second class of cases, in which the proper uterine cavity is enlarged or dilated, and that probably very rapidly, in order to contain and retain the puerperal clots.

Rapid enlargement of the uterine cavity is well known as a not rare occurrence soon after parturition. This enlargement is too rapid for growth of tissue to have any part in its production. Growth of tissue goes on in regulated concurrence with the expansion of pregnancy; and even in morbidly rapid or extreme expansions there is at least time for growth of tissue to aid in the expansion. Of extreme expansion, often with thinness of wall, examples are found in the hydramnios of advanced pregnancy, and in some cases of uterine hydatids, where it may occur to a marvellous degree either in early or late periods of the gravid condition. But of such expansion as we here consider better illustrations are found in the (too few) post-mortem experiments of Glenard, and in the cases of introduction of the hand into the uterus at long periods after delivery.[2]

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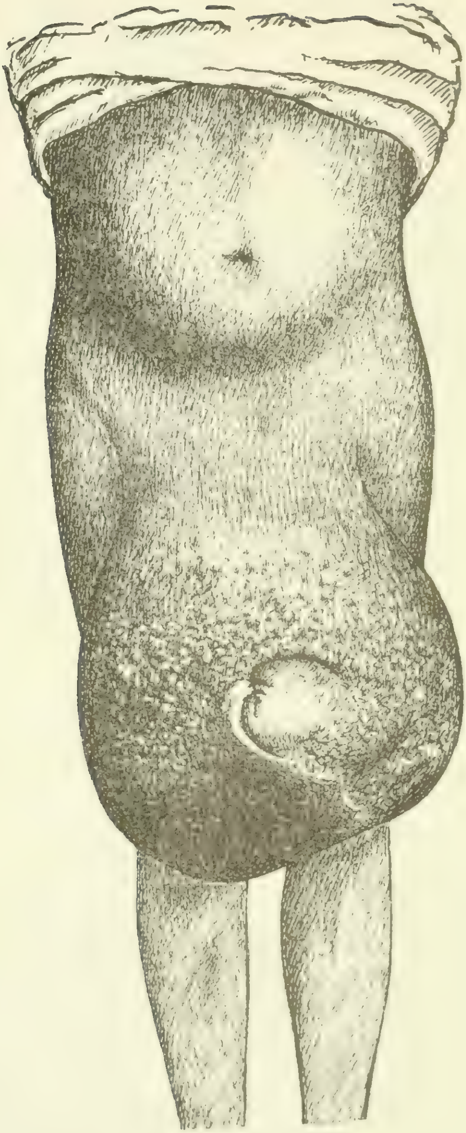
[1] *Klinische Vorträge*, 1851. I. Abtheilung, S. 472.

[2] See *British Medical Journal*, Oct. 27, 1877, p. 583.



Ingleby[1] mentions that a case "in which so late as the nineteenth day after delivery the uterus was emptied of a large quantity of putrid blood, shows its capability of distension at this remote period." In my own practice a well-observed case occurred, in which the sudden dilatation with formation of intrauterine clots occurred on the ninth day after delivery. Mrs S., a healthy young woman, was attended by me in 1862 in her first confinement. It was easy and natural. Eight days after her confinement, while she was making a satisfactory recovery, she was seized with faintness and a free discharge of blood. When I reached her, I found the uterus enlarged to about the size of a four months' pregnancy, its fundus rising above the pubes to fully half-way towards the navel. It was by kneading made to contract and expel large firm clots. Ergot and pressure maintained the contraction. When reduced in size, the uterus did not feel more bulky than it would be expected to be on the ninth day. It is a curious fact that this woman, delivered on December 3d, was again delivered on September 29th of a mature, well-developed child, which came into the world a fortnight earlier than the day calculated for by the doctor in attendance. She had had within four weeks after delivery what she described as a scanty anticipatory menstrual flow.

The cases of relaxation and dilatation of the uterus in the puerperal state, when there has been no retention of ovuline structures, which have come within my observation or reading, have been cases of hæmorrhage rather than of puerperal clots. In Ingleby's case, where the clots were fetid, there is evidence of retention of clot for a considerable time; but I know no case where the decolorization of the clot indicated length of retention in utero. But there is no apparent reason why such an occurrence may not take place; and M'Clintock's case of so-called fibrinous polypus is the nearest approach to its realization. It would, indeed, be a case in point were there any evidence that the uterus had been expanded to contain the decolorized clot which he removed.

## ARTICLE II.—*Elephantiasis Arabum.* By EDWARD HENDERSON, M.D., F.R.C.S. Edin.

(*Continued from page* 596.)

I HAVE already referred to the scrotum as a common seat of elephantiasis in the male; and most surgeons are familiar with the appearance of the remarkable growths resulting from the disease in this situation,—if not practically, at least through the medium of the illustrations given in standard works on surgery. The figure in the diagram is a sketch-tracing from a photograph of one of these tumours, which, with the assistance of my partner, Dr Neil

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[1] *On Uterine Hæmorrhage*, p. 248.

Macleod, I removed last year. It will serve to illustrate a description of the disease in its fully developed form. Those smaller growths in which the penis is not concealed, and in which the position of the testicles can be easily made out, may—on the principle that the greater contains the less—be left without special notice.

The tumour, then, is on its surface rugose and irregularly tuberculated, or, it may be, studded here and there with the small white glistening swellings of obstructed and dilated lymph-channels. At its upper limit the rough and thickened skin passes gradually in front and behind into the stretchd but otherwise smooth and natural, covering of the belly and perinæum; while on its sides two semicircular patches of nearly normal integument mark the surfaces on which it rests in contact with the patient's thighs. Its vascularity, which is considerable, is indicated neither by arterial pulsation nor by enlargement of the surface veins.[1] It feels solid throughout, and is manifestly of great weight. On parts of its surface, especially behind and below, it retains the print of firm pressure, but the "pits" are shallow, and the deeper tissues show little sign of yielding. In most cases points can be determined where pressure excites in the patient obscure sensations of pain, indicating that a testicle has been compressed, and guiding the surgeon to a knowledge of the position of these organs. In the middle line, and nearly in the centre of the tumour, is a projecting fold of skin,[2] partially surrounding a "depressed umbilicated" opening, which marks the termination of the channel along which the urine passes. This channel is formed of the skin of the penis, which has not shared in the general hypertrophy, but has been gradually drawn downwards and inverted by the growth of the surrounding tumour, and now remains attached above to the glans, much as a stocking partially stripped from above and turned outside-in might rest on the end of the foot. This description, although sufficiently general for my present purpose, does not embrace every variety of the tumour, as I have avoided in it any reference to conditions which I have not myself observed.

Kaposi and Manson take special notice of the unaltered condition of the integument at the sides of these tumours, which has been variously accounted for.[1] I am myself of opinion that the absence of hypertrophy in these situations is mainly due to the support which the growth receives from the thighs; and this effect of pressure, which I have already noticed when speaking of the small feet frequently associated with greatly enlarged legs, is also illustrated in the skin of the penis, which remains free from œdema and hypertrophy in those cases where it is enclosed in the mass of the scrotal tumour. The œdema being undoubtedly the immediate cause of the hypertrophy, it follows that where it can be lessened or driven out the development of tissue will be retarded or prevented. If the normal or comparatively normal skin at the sides represented merely the amount borrowed from above by down-dragging, then we should expect to find similarly healthy tissues of about the same extent in front; but this was certainly not the case in the tumours which I have myself had an opportunity of examining.

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[1] "Some idea of the character and amount of the bleeding to be anticipated may be obtained from the nature of the tumour. If this is warm, small, and growing, and if the dartos contracts strongly and readily on irritation of the skin, we may expect considerable arterial bleeding; but if, on the contrary, the tumour is large, cold, or ulcerated in parts, and the dartos slow to contract, or contracting but feebly—in other words, if the tumour shows signs of degeneration—the bleeding may be almost entirely venous."—(Manson, *China Customs Medical Reports*, 1872.)

[2] Somewhat unusually developed in the particular example under consideration.

Elephantiasis of the scrotum, even when the tumour is of small size, appears to be but little influenced by any treatment hitherto devised; and when the growth is so largely developed as to cause serious inconvenience it must be removed by the knife.

In operating, the first step should be the compression of the whole tumour by a properly applied elastic bandage; and this is done not merely with a view to save blood, but also, by removing œdema, to render the subsequent proceedings more easy and certain. It is advised that the tumour be also raised, to assist by gravitation the removal of the fluids. Too much time should not be wasted in these preliminaries, as awkward or unduly prolonged attempts to reduce bulk may exhaust the patient, and actually favour that condition of shock after the operation which it is our object to lessen or arrest. Fortunately, however, we possess in the elastic bandage the means of very rapidly and certainly effecting our purpose; and although the proper application of this bandage may, in some cases, be attended with difficulty, still such difficulty will but rarely be found insurmountable, if only we have a sufficient supply of the elastic material at hand. If, for any reason, the elastic bandage cannot be applied, suspension alone will alter very materially the bulk and consistence of the tumour. Unaided suspension, however, needs much longer time for its satisfactory operation. Manson, who strongly advises its use in every case, says "It cannot be employed too long," and speaks of "the degree of softening and diminution effected by it in two or three days" as "marvellous."

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[1] "The tumour becomes altered in appearance and form in different parts and according to external conditions; thus, for example, it is smooth where the thighs are in contact with it and support it behind" (Kaposi—Hebra on Diseases of the Skin).—*Sydenham Soc. Trans.*

"The surfaces opposed to the thighs are covered with soft healthy skin, borrowed by the dragging and growth of the tumour, and extending as far as the anterior surface in front and the posterior behind, and downwards for four or five inches.—Manson, *loc. cit.*

The surgeon's next care is to provide means for arresting bleeding during the operation. Of all the various instruments proposed for the purpose, none can compare in efficiency and security with the solid india-rubber cord, which has now so commonly taken the place of the tourniquet. Were we dealing with the pedicle of a fatty tumour or a gigantic polypus, the degree and equality of the pressure applied would perhaps be of but little consequence, if only it were sufficiently firm; but it must be remembered that, besides the skin, the spermatic cords, and the root of the penis, a hernial protrusion of the bowel may possibly be one of the structures enclosed in the neck of one of these scrotal tumours. There is also a fatal objection to all fixed inelastic methods of compression, and that is the certainty with which the pressure slackens, when, by incision or amputation of the tumour, the contained fluids are allowed to escape freely. Insufficient pressure may be even worse than useless, from the encouragement it gives to the escape of blood from the veins. I have myself seen this result, and am therefore in a position to speak positively regarding it. It is pointed out by Manson. Judging from my last year's experience of a tumour whose neck had a circumference of about twenty-five inches, I should say that a solid india-rubber cord with a diameter of five-eighths of an inch is sufficient for the purpose of compression. It should be passed twice round the neck of the tumour, and secured by some trustworthy fastening, in addition to, or instead of, the ordinary clip, which cannot always be depended on. Esmarch's double tube, with attached chain, is needlessly large, and takes up too much space where space is of consequence. The cord cannot reach too high, but there may possibly be some risk of its slipping or being pushed downwards. To prevent such an accident, it may be attached to a waist-belt by two or more guys or stays; and this can, of course, be easily accomplished with strips of common bandage. Even with a sufficiently long elastic cord, I think such support should be preferred to the method given by Esmarch in fig. 267 of his *Surgeon's Hand-Book*, where he illustrates the "application of the elastic ligature for the penis and scrotum." Retraction of the tissues after the amputation must of course be carefully guarded against, but, I believe, chiefly by taking care that the final incisions are placed well on the distal side of the compressing cord. In the case of small growths, one could conceive of two strong (bayonet-pointed) needles being so placed in the neck of the tumour as effectually to prevent retraction, while at the same time avoiding injury to important structures. Judging from what I have myself seen, I should say that the danger of retraction is not great; indeed, it seems to me that under a sufficiently firmly applied elastic cord, and with ordinary care in operating, no recoil of consequence can take place. Lastly, the compressing cord might be passed under bridges of integument dissected up for the purpose from the sides of the growth, a plan lately adopted by Mr Annandale, in dealing with large mammary tumours.

If, in some one or other of these ways, we have, as I believe, the power of safely and perfectly preventing hæmorrhage, there is no reason for haste in the subsequent steps of the operation; and the removal of the whole mass, including the penis and testicles, which has been hinted at by some, as possibly necessary in exceptional cases, and which has even been practised on one or two occasions by experienced surgeons, may be dismissed as a proceeding of unnecessary and unjustifiable severity. Setting aside for a moment, however, the power which I claim for the india-rubber cord, it may fairly be questioned whether the removal of the growth *en masse* can ever be regarded as good surgery. Sir Joseph Fayrer states, in his work on Clinical Surgery in India, that in none of the twenty-eight cases which he tabulates were the genital organs removed; adding that in Bengal they are always preserved, however large the tumour may be. Manson, writing in 1872, though opposed to any plan for arresting bleeding by compression of the neck of the tumour, points out at the same time the serious risks attending the wholesale removal of the genital organs, and decides against such a plan of operating.

The testicles in large growths are deeply buried, and lie low in the tumour, the spermatic cords being greatly thickened and elongated. In dissecting out the testicles the necessary incisions may be freely made under the protection of the elastic cord; but it should be remembered that large hydroceles are common, and that, on the authority of Pruner, hernial protrusions are "frequent" complications. Judging from the clinical records which I have myself had an opportunity of consulting, I should, however, doubt the strict accuracy of Pruner's statement. That a hernia may occasionally complicate these cases is of course possible, but that they "frequently" do so seems open to question. The tunica vaginalis, if much thickened, should be removed. In the general description which I gave of these tumours, I pointed out that the skin of the penis does not usually share in the hypertrophy of the surrounding tissues; and in some cases it seems possible to utilise it, in whole or part, as a covering for the organ. The opinion, however, of surgeons who have had much experience of these operations appears to be opposed to the retention of any portion of this skin. It is recommended that the penis be exposed by the longitudinal division in an upward direction of all the tissues lying above a strong director which has been passed along the urinary channel down to the glans.

The testicles and penis being cleared, the next proceeding is the formation of the side-flaps. In shaping these the surgeon should be guided by the requirements of the case, and also, of course, by the amount of sound skin at his disposal—neither, however, fearing, on the one hand, to include a small portion of thickened skin nor, on the other, being anxious to obtain very ample coverings. It is true that in the first part of this paper (when speaking of amputations of the lower extremities) I have quoted the warning given by one authority against the retention of any part of the hypertrophied skin of these scrotal tumours; but it is right that I should now add to this Pruner's views on the same subject. As quoted by Kaposi, Pruner says:—"Where it has been unavoidably necessary to leave and make use of certain portions of skin which are not thoroughly healthy, the condition of these will be found to improve, not merely during the suppurative and cicatrizing stages, etc., but also after the cicatrization has been accomplished." In operating last year I purposely left portions of considerably hypertrophied skin. The flaps were unnecessarily redundant, and though there was some sloughing of the edges, quite enough of the diseased tissue was left to test the matter so far as one case could do it. I shall watch the final result of this. Two months after the operation, contraction was still going on, and there was certainly no tendency to reproduction of the growth. My patient was, however, an old man, and his tumour, though large and vascular, could scarcely be described as a rapidly-growing one.

Whether much or little skin is to be saved from the back of the growth, the line through which the amputation is performed should now be marked on the surface of the perinæum with the knife, as the mass of the tumour is apt to obscure the last steps of the operation.

To facilitate the handling of the larger growths at this point, Manson makes use of a triangular supporting-board, fitted to the size of the tumour. This board is attached to the operating-table by a strong hook-and-eye, and has a handle at its broad end. The tumour is fastened securely to this board by strong twine passed through the tissue, and through holes in the wood, by means of strong needles. Some years ago I assisted Dr Johnston (Shanghai) in operating on a large scrotal tumour in which this plan was tried and found of service; but last year I had no special apparatus, and experienced no difficulty.

Should the growth be very large, a suspension apparatus would probably be found of use, and might be an improvement on the supporting-board. A pair of strong calipers with incurved points, resembling the instrument employed by workmen in the raising of heavy weights, might be sunk in the substance of the tumour, and the whole could then be easily raised by a pulley attached to the cross-beam of Annandale's apparatus, or to the roof of the operating-room. In this way the perinæal incision could be well exposed, and the unwieldy mass swung on one side when the division of all the tissues was completed.

All visible vessels, whether veins or arteries, should be carefully secured before the india-rubber cord is loosened, since it will be found practically impossible to reapply pressure of this kind after it has once been relaxed. To expedite the ligature of the vessels, which are often very numerous, the surgeon and his assistant may with advantage work on opposite sides of the stump, using the forceps or the catgut-threaded needle as best suits the requirements of the case.

The final steps of the operation, which may, I think, be passed over without special description, are the adjustment and stitching of the flaps.

Full antiseptic precautions cannot be easily carried out in such cases, but Dr Macleod has proved to me that even here they may be so employed as greatly to lessen the more immediate risks, and, indeed, materially modify the whole subsequent history of the case.

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## ARTICLE III.—*On Medical Education in Spain.* By JOHN BOYD, M.D., Slamannan.

SEVERAL years ago the duty devolved upon me of corresponding on the part of his family with a young friend from this district, who was studying theology at the University of Valladolid, in Spain; and in order to keep up the practice of Castilian composition, I made use of that idiom in my letters, which necessarily passed through the hands of Señor Cameron, Rector of the Scotch College in that ancient seat of learning, and who, I was assured, regarded them "*no con malos ojos*"—with no evil eye. Although eighty years of age, the venerable rector still took a lively interest in everything pertaining to his native land, which he had not revisited for full half a century; and he seemed pleased to learn that Slamannan, besides the best household and steam fuel, a plentiful supply of plastic material for the fabrication of young doctors, was able to produce epistles done in decent Spanish.

Being desirous of ascertaining the present condition of the medical faculty at Valladolid, I sent a series of questions on the subject; but the severe illness of Mr M. necessitating his homeward return, followed by the death of Señor Cameron, frustrated my endeavours in that direction.

At the commencement of this year, having been incidentally led into correspondence with the editor of the *Lecciones Medicas de Sevilla*, Dr Ramon de la Sota y Lastra, Professor of Clinical Surgery in the Medical School of Seville, I propounded to that gentleman a number of inquiries, not only relating to his own institution, but to those of the whole Catholic kingdom. On the 13th inst. I received a reply, of which the following is a full translation, some personal and business details excepted; but I much fear I shall fail in conveying the high-toned polish and perspicacity of the original. It begins:—

"SENOR D. JUAN BOYD,

"Muy Señor mio y respetable Comprofesor,—It is now time I replied to your esteemed letter of the 8th April. I have not done so before for various reasons. First, from having been in the months of May and June very much occupied with a great number of patients, and with the examination of my pupils; besides which, I was busy with some work for the Medical Congress which took place in Cadiz during the last month; and lastly, from a family misfortune, the man having died who received me in my orphancy, and to whom I owe what I am. . . .

I received the May number of the *Edinburgh Medical Journal*, and read in it your capital review criticising the Italian booklet, *Sulle Spiagge del Mare;* and with the frankness that characterizes me, I tell you that the writing in question is sufficient to stamp the scientific merit of a person, and that you have largely gained, not only in my opinion, but also in that of those in the profession of greater importance than myself. . . . You wish to know the class of studies requisite in Spain to obtain the title of Medico, and I now proceed to state cursorily what you ask me.

"Education in Spain is divisible into primary or elementary letters, into arts or secondary instruction, and in medicine (since this we discuss) or superior instruction. The elementary is composed of reading, writing, Christian doctrine, Castilian grammar, and good manners. There is no fixed time for the learning of these; they can be studied wherever the parents prefer, but there are public schools in all the villages or municipalities.

"When desirous of passing to the secondary instruction, it is necessary to submit to an examination of all that constitutes the first, and if the alumnus is approved of, he passes, if not, no. In the secondary education an infinity of matters are required that bear little or no relation one with another,—not adapted—nor can they be adapted—to all dispositions; and the time is insufficient to acquire the most superficial acquaintance with them. But this has been imported from France after our unblessed revolution of 1839; and the aim is to form encyclopædists,—that is, "*eruditos á la violeta*," as quoth the Castilian proverb: they finish, because they have nothing learned during the five years exacted for these studies. At the end of them the boys go out with their heads stuffed with bad definitions, which they forget in a few months. Whether I am right or not in what I say, you will judge for yourself when I mention that the studies of secondary education are the following: —the Latin language, Castilian grammar, rhetoric and poetry, geography, universal history, Spanish history, psychology, logic and ethics, arithmetic, geometry and trigonometry, physiology, hygiene, physics, chemistry, natural history, and agriculture. Examined and approved of in these different branches, they have to make the exercises for the degree of Bachelor of Arts, which are two general examinations—one of an hour, and the other an hour and a half. Having obtained the B.A., they require to study a year, termed that of enlargement, which consists of three lists, natural history, physics, and chemistry. The secondary instruction can be studied privately or in any particular college; but in all the provincial capitals the councils or *deputaciones* support official establishments of secondary instruction, known by the title of Institutos—before the Professorate of which the examinations of the primary and secondary education and that of the grade of B.A. require to be undergone. The superior education, or that of medicine, comprehends the following branches:—two courses of general and descriptive anatomy, two courses of practical dissections, physiology, private hygiene, general pathology, therapeutics, materia medica and the art of prescription, medical pathology, surgical pathology, operations and bandaging, obstetrics, public hygiene; two courses of clinical medicine, two courses of clinical surgery, one course of clinical midwifery. There is no time fixed for going through these studies, but four years is the minimum exacted. The examinations on all these lists are held in the order laid down; that is, they cannot possibly be examined in clinical medicine without having previously passed in medical pathology; and after they have been approved of in all, they must submit to the exercises of the licentiate. These exercises are,—a theoretic examination, during one hour, upon some point of the curriculum, the examinee having to answer verbally to as many questions as may be put to him in the various branches; the second consists in his examining one patient, taken by lot out of three chosen by the judges, from an hospital. The alumnus is allowed half an hour to consider, and he must then describe the history of the patient, diagnose the malady, and establish the treatment. There are three judges, each of whom makes notes of what the candidate has said, and the latter must reply. This second act must continue for an hour and a half. The third act is to practise an operation on the dead body, chosen out of three which are taken by lot; then a programme of operations is formed. All these trials being approved of, he receives the title of licentiate, which qualifies him to exercise the profession in all the Spanish dominions.

"The study of medicine may be carried on privately or in the official establishments; the Government supports, however, medical instruction in the following universities:—Madrid, Barcelona, Valencia, Granada, Sevilla, with residence in Cadiz, Valladolid, Zaragoza, and Santiago. There is, besides, the provincial school of Sevilla, to the professorship of which I belong, subsidised by the Deputacion Provincial. This corporation pays the professors, the assembly, the dissectors, the internal pupils, and dependants of all kinds. It keeps the edifices in repair, and replaces the furniture.

Moreover, in accordance with the state of its exchequer, it disburses an annual sum, more or less, to purchase machines, apparatus, instruments, and all the materials necessary for educational purposes, to the expenses of which the products of matriculation and taxes on the titles are also applied. In order to qualify for professorate, and also for being medical director of mineral water establishments, it is requisite to hold the degree of doctor. To obtain this the study and approval in the following lists are required:—normal and pathological histology, chemical analysis, and medical history and philosophy. The studies may be carried on privately, but the examination must imperatively be held in Madrid, the only university where the Government pays this instruction. In addition to passing the examination on the above lecture-lists, the examination for graduation is exacted—this last consisting in writing a dissertation on a given theme, and the judges making objections.

"The number of students who matriculated in the last session of 1878 to 1879 was above seven thousand; the number of licentiates passed was one thousand one hundred and more. This number exceeds the requirements of our population, and I don't know what so many medicos as there will be in Spain in the course of four or five years are going to do.

"I am not sure if I have succeeded in satisfying your wishes with the data I have advanced; but if you want to know anything further, just tell me frankly, since, not to be diffuse, I can't say how it comes that we Spaniards appear to sleep the sleep of Lazarus, and that we seem to require the advent of a Messiah to awaken us. Nevertheless we do not deserve the disrespect with which Europe regards us: it is enough not to manifest vain arrogance.

. . . . . . .

"With kindest wishes, and much at your service,—I am, yours very truly, RAMON DE LA SOTA Y LASTRA.

"SEVILLA, *8th September* 1879."

## ARTICLE IV.—*Observations on some Points in Dextral Valvular Disease of the Heart, being a Graduation Thesis.* By ALEXANDER MORISON, M.D. Edin., of London.

(*Continued from page* 629.)

### PART IV.

### TREATMENT.

THE points which I purpose considering under this heading, with as much brevity as possible, are:—

(1.) The position most appropriate for a patient suffering from "dextral" valvular disease.

(2.) The temperature and atmosphere in which such a patient should, if possible, be placed.

(3.) The most suitable diet, including the question of stimulants.

(4.) The indications for venesection.

(5.) External remedial or alleviative applications.

(6.) The administration and object of internal remedies, with special reference to the indications and contra-indications for the employment of ammonia and digitalis.

*a.* The position in which the patient is most comfortable is probably, in all cases, an appropriate adaptation of the economy to the exigencies of each individual case. A more or less upright position of the upper half of the body (orthopnœa) may, however, be regarded as that which is most favourable to the transmission of blood from the systemic venous system through the right heart to the lungs ; but this may vary in degree, according to the seat of the valvular lesion (whether tricuspid, or pulmonary, or both), and the extent to which the valves are rendered incompetent, and also, according as we have to do with incompetency from organic lesion, or functional insufficiency from lung disease. In Sir James Paget's case of pulmonary regurgitation, the recumbent position was easily maintained, as there was evidently no considerable regurgitation into the large veins; but in most instances, and especially where an impeded pulmonary circulation is the *origo mali*, or where there is any serious imperfection of the tricuspid valve alone, or in conjunction with pulmonary insufficiency, some degree of orthopnœa is a result of the condition. This fact merely signifies that in this position the great suction force of respiration can be most effectually employed from the possibility of fixing the respiratory muscles so as to act more energetically, and from avoiding that compression of the thoracic walls by the weight of the body against resistant surfaces, such as the bed, which is calculated to impede the full expansion of the chest. We may likewise see in the emphysematous condition of the upper lobes of the lungs, in some cases of dextral valvular disease, an expression of exaggerated effort on the part of those organs, and therefore conclude that we should place the body in that position in which they may best continue their excessive labour with the least exertion. It is, however, possible that this emphysema may also to some extent be a consequence of the usually congested and more or less inefficient condition of the lower lobes.

*β*. The indications to be fulfilled in respect to temperature and air may be shortly stated to be the maintenance of such a degree of warmth as is necessary to secure at least a normal cutaneous circulation, and thus to prevent excessive blood pressure in the deeper vessels and heart. The great atmospheric necessity is, of course, a due oxygenation of the blood in the impeded pulmonary circuit—a condition best fulfilled by as free ventilation as is compatible with the maintenance of moderate warmth.

$\gamma$. A light, nutritious diet, given in small quantity, to facilitate digestion by an alimentary canal, whose functions are always more or less impaired by a chronic passive engorgement, will best suit most of such cases. As in most instances of any species of diseased heart, a restriction of fluid food is advisable, lest the bulk of the blood circulating in the vessels be too suddenly increased thereby.[1] In disease of the right side of the heart it is especially necessary that too large a quantity of fibrinogenous articles of diet should be avoided, to diminish as far as in us lies the possibility of coagulation in the right chambers of the heart, or in the systemic venous or pulmonary arterial system. Alcohol, in one form or another, but especially brandy, from its twofold property of invigorating the action of the heart, and maintaining a more or less dilated condition of the capillaries, is indispensable in the treatment of "dextral" valvular incompetency, from whatever cause arising. But we must be on our guard against any excess in the administration of so highly carbonaceous a substance as alcohol to a patient whose blood is already surcharged with carbon from imperfect aeration.

$\delta$. Judicious venesection, now happily resuscitated from long and culpable neglect, may prove of the greatest importance in valvular disease of the right heart. Mr Kinglake's withdrawal of 1248 ounces of blood from the system of his patient by 4-ounce venesection, on 312 separate occasions, during the space of two years, is perhaps as good an example of the bloodthirsty therapeutics of our ancestors as any on record ; yet, if we accept his authority, the patient seems to have been greatly benefited thereby. A less frequent and less copious relief of tension to an intensely engorged venous circulation would probably render useful service still.

$\epsilon$. By external remedial or alleviative applications, I mean poulticing, counter-irritation, or derivative treatment generally, for the intercurrent congestion of various organs (lungs, kidneys, etc.), of such frequent occurrence during the course of the cases in question. The external application of extract of belladonna appeared to relieve the præcordial anguish of the patient under my care.

$\zeta$. For the rest, normal secretion and exertion must be favoured as far as possible, and, if arrested, an endeavour made by recognised means for their re-establishment. It must always be borne in mind that the most delicate index to the cardiac condition is the state of the urinary secretion ; in combating an embarrassment of the latter, therefore, we must endeavour to regulate the former.

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[1] Care must be taken, however, not to render the blood too viscid by too great a restriction of WATER. In all cases of engorged right heart, whether from pulmonary or cardiac disease, water appears to have a beneficial action by promoting fluidity of the blood, and the consequences of this—easy transmission through the vascular system, and improved excretion, especially by the kidneys.

This, however, is sometimes beyond our power in the first instance, and can only be effected after the cardiac repletion has been relieved by purgative evacuants and lumbar counter-irritation, to remove renal congestion, or, if necessary, by venesection. Dr B. W. Richardson's well-known investigations on the cause of the coagulation of blood, though not universally endorsed, are of great practical importance, if it be true that the fluidity of the blood is favoured by the volatile alkali ammonia. Dr Richardson, however, pointed out in a paper "On the Antiseptic Properties of Ammonia," in the *British Medical Journal* for 3d May 1863 (Ranking & Radcliffe's *Half-Yearly Abstract of the Medical Sciences*, vol. xxxvii. p. 337), "that this alkali had in addition the power of arresting the oxidation of tissues, and even prevented the action of ozone." "Hence (*loc. cit.*) long exposure to ammoniacal vapour, by arresting oxidation, produced extreme anæmia and a low depraved condition of the system altogether, with reduced respiration, reduced appetite, reduced muscular power, and reduced energy."

In disease of the right heart, unfortunately, whether organic or functional, we have to do both with a condition of imperfect oxidation of the blood and with conditions favourable to its coagulation. Of the two evils, therefore, we must choose the least, according as the patient appears at different times to suffer most from pulmonary dyspnœa or cardiac venous engorgement. When the former is the case, ammonia may be given sparingly or withheld, and when the latter, it may be administered more liberally.

The undoubted efficacy of chlorate of potash in maintaining intrauterine life in some instances, and its chemical property of disengaging oxygen, render it rational to suppose that its combination with ammonia may restrain to some extent the influence of the latter in preventing oxidation, while its influence in maintaining the fluidity of the blood would not be interfered with.

In short, the prevention of spontaneous coagulation of the blood, and its due arterialization, are the great desiderata, and whatever is now known to promote these conditions, or whatever may hereafter be found to have such an influence, will be found useful in the class of cases which we are discussing.

The question of the employment of DIGITALIS in valvular disease of the right heart demands fuller consideration than the preceding well-known and almost generally observed rules of cardiac therapeutics. Drs C. Hilton Fagge and Thomas Stevenson, in a paper entitled "On the Application of Physiological Tests for Certain Organic Poisons, and especially Digitaline," published in the *Proceedings of the Royal Society of London*, vol. xiv. p. 272, state that, after poisoning with digitaline, helleborus, and scilla, the ventricle remains "rigidly contracted and perfectly pale after it has ceased to beat," and the fact of death "in systole," after doses of digitalis, has been corroborated by many other competent observers. Dr George W. Balfour, in the work already quoted, says, at p. 308, "Digitalis, while it slows the heart's action, at the same time increases the force of the ventricular systole, this dilatation lessening *pari passu* with the increased action of the drug, therefore, as a rule, with an increase of the dose. In aconite poisoning, or in threatened asystole, the aortic pressure falls because the over-distended ventricle is unable to contract upon its contents, each contraction only succeeding in expelling a small quantity of blood off the top of the distended ventricle; in digitalis poisoning, on the other hand, the aortic pressure falls because the over-contracted ventricle permits but little blood to get into it, and can consequently send but little forward."

While there is thus unanimity as regards the physiological action of digitalis on the heart, there is a most confusing variance of opinion among recognised authorities as to the employment of digitalis in disease even of the left heart, while there seems to be no scientific basis whatever for its administration in organic disease of the right heart. For example, from the passage last quoted from his work, at p. 308, Dr Balfour derives his warrant for the use of digitalis in aortic incompetency: "A disease," he says, "in which we often obtain the most brilliant therapeutic results from the use of this drug." The prolonged diastole he considers compensated by the diminished ventricular capacity.

Dr Balthazar Foster, on the other hand, in his *Clinical Medicine*, p. 97, states that "The diminution of the frequency of the heart's beats under digitalis means an increase of the period of the dilatation of the ventricles. Pulse traces readily show this. It is during this very period that aortic insufficiency produces its ill effects, and it is consequently not hard to understand why digitalis acts injuriously. . . . There is one condition that warrants its use—that of over compensation."

It is not my intention to criticise these discordant views, though my own experience, such as it is, agrees with that of Dr Balfour, but merely point them out to show that if such opposite opinions can be maintained with regard to so comparatively common a lesion as aortic regurgitation, it is little wonder that knowledge of the effect of digitalis in the much rarer instances of organic valvular disease of the heart can scarcely be said to exist.

Dr S. Milner Fothergill (*Digitalis, its Mode of Action, etc.*) says, "In valvular disease of the right side we do not know any peculiarities connected with the pulmonary orifice; disease here is rare, and the same indications and contra indications would exist as in aortic disease."

In tricuspid regurgitation the same author states, "The administration of digitalis is apparently of no benefit whatever; the increased action of the left ventricle is too far distant to be of any avail. The action seems lost over the length of the systemic circulation, and in the dilatability of the veins." And again (*op. cit.*), "In tricuspid obstruction, digitalis and all other cardiac neurotics would be useless for the same reason." I do not dispute with Dr Fothergill the fact of the inutility of digitalis under such circumstances, but, as I shall show later, I cannot altogether agree with his theory of this inutility.

Dr Balthazar Foster, in his *Clinical Essays*, at p. 103, also says, "Two cases in which digitalis failed me unexpectedly were examples of mitral stenosis, associated with a similar lesion in the right side of the heart." As many cases of mitral stenosis might be cited, in which the administration of digitalis was beneficial, we may conclude that the disturbing element in these instances was the dextral disease.

As this question of the advisability or non-advisability of the employment of digitalis in the treatment of organic valvular disease of the right heart is of the greatest practical importance when such, happily rare, cases are met with, I shall now add the following particulars of its use and apparent effects in the case of E. W. G. M., and if we compare the periods during which the drug was administered with corresponding dates in the clinical progress of the case, the inference is highly significant of its evil effects. From the absolute want, so far as I know, of published clinical experience on the part of others in this respect, I had no sources of information whence I could have learned, not only the inutility, but, as I now think, the positive danger of giving digitalis under these circumstances. It must be remembered that I was then under the impression that the case was one of double pulmonary lesion, associated with mitral regurgitation, and therefore argued that as the latter was almost invariably benefited by the action of digitalis, and as, like Dr Fothergill, I regarded the pulmonary lesion as analogous to double aortic disease, which I had likewise known to be benefited by that drug, I concluded that the union of two disorders benefited by one and the same agent would result in benefit to both; and so convinced was I of the correctness of this argument, that I attributed the subsequent phenomena of retrograde congestion to increasing dilatation of the right heart, and as a further indication, rather than otherwise, for the employment of still more of that opponent of dilatation—digitalis, though my occasional abandonment of the drug sufficiently shows that I entertained doubts of its beneficial action. I accordingly prescribed five minims of the tincture every four hours from the 20th of May till the 2d of the following June, when, as will be seen in the context, ecchymotic purpura appeared, and the digitalis was stopped. This phenomenon soon disappeared, and on June the 19th, thinking that five minims had possibly been too small a dose, I increased it to seven and a half minims every three hours, and continued it till the 24th of June. After resuming it on this occasion, the purpura at first continued to fade, and I was inclined to regard this as evidence of a beneficial influence exercised by the drug, but it again returned, and I reduced the dose to five minims every three hours, and ultimately combined it with ten minims of liquor secale cornuta on the appearance of the hæmoptysis referred to in the clinical history of the case.

Subsequent reflection upon the entire course of the case leaves little doubt on my mind, and will, I think, convey the same impression to the mind of any one who peruses this paper, that the retrograde phenomena which I attributed to the progressive overthrow by disease of the barriers to such engorgement, in a case so fatally maimed in the venous heart, were in reality precipitated by the mistaken employment of a drug most potent for good in many forms of heart disease, but likewise, like all such, most potent for evil, when from insufficient knowledge its energies are misdirected. Let us now try to discover the most feasible explanation of the pernicious influence exerted by digitalis on a circulation embarrassed in consequence of organic valvular disease in the right heart. As my personal experience is limited to the case of E. W. G. M., my argument will, of course, be founded chiefly upon it; but, as both Drs Fothergill and Foster speak of the inutility of the drug in the case of dextral complications, it is not unreasonable to suppose that my remarks may have a more general significance, notwithstanding the limited data from which I argue.

Were the effects of the drug due to its action upon the right or the left ventricle, or both?

There is little doubt that the supra-sternal systolic pulsation, noted in the clinical history of my case, was due to powerful regurgitation into the innominate veins by way of the superior vena cava, for it is scarcely possible that even a *dilated* pulmonary artery could have exhibited visible pulsation in this situation.

This pulsation, it will be remembered, was greatly subdued after digitalis had been employed for some days, although the distress of the patient was not proportionately relieved. The subdual of this regurgitant pulsation, it is rational to suppose, was the result of diminished regurgitation, for the effect of digitalis is not to lessen the force of cardiac systole, and this is the only alternative by which the phenomenon could have been explained. We know that in the later stages of many cases of tricuspid regurgitation individual pulsations are lost in a general turgescence of the cervical veins. Had this been the case in the present instance, the site of the formerly pulsating vessel would probably have been occupied by a distended trunk, and accompanied by the turgid venous branches and suffused face characteristic of such a condition. This, however, was not evident. The effect of digitalis, then, in so far as it diminished regurgitation from the right ventricle (if I am correct in supposing it did so), cannot be regarded as having been DIRECTLY conducive of the phenomena of serious retrograde congestion which supervened, and therefore we may be allowed to doubt whether digitalis, in so far as its effect upon the condition of the right ventricle was concerned, had any important share in the production of the untoward circumstances which followed its administration. Dr

Fothergill considers the inutility of digitalis, under the circumstances we are discussing, to be due, as has already been stated, to the increased action of the left, being at too great a distance from the surcharged right ventricle. The left ventricle, however, we must remember, while the rapidity of its pulsations may be increased by digitalis, has a diminished capacity from the same cause, and the extreme effects of such a condition cannot better be demonstrated than by the following experiment in Dr Fothergill's work already quoted. At p. 3, after stating that half a dram of digitalis was given to two sparrows, he says, "On opening them immediately after death the left ventricle in each was found firmly contracted, the lungs so congested as almost to be hepatized, the right ventricle full of blood. It was evident that the condition of the lungs and right ventricle was due to inability to drive the blood into the contracted left ventricle." A minor degree of left ventricular contraction would doubtless have shown the same effects to a less extent. It is true that the "inability to drive blood into the contracted left ventricle" is a feasible explanation of the co-existent retrograde engorgement, but on this hypothesis the influence of the left ventricle is purely *passive.* Can it, on any supposition, exercise an *active* influence? I have endeavoured to prove by experiment, in the physiological argument, that the left ventricle in particular exercises a considerable absorptive power by way of the pulmonary veins, and have likewise tried to show, both by experiment upon the sheep's heart, and by placing a ligature round the bag representing the left ventricle in the indiarubber schema of the circulation, that the absorptive power of the left ventricle is in direct proportion to its capacity, *i.e.*, a diminution of its capacity and absorptive power, and *vice versa.* A diminution of its capacity and absorptive power, moreover, was found to favour retrograde engorgement, the removal of which was effected by increasing the capacity, and with it the absorptive power. The effect of digitalis upon the heart is analogous to the effect of the ligature upon the caoutchouc bag. The capacity of the former is thereby diminished, and with it, we may conclude, its absorptive power. By having a diminished capacity the left ventricle may be considered conducive of engorgement passively; by a necessarily simultaneous diminution of its absorptive power, it must therefore exercise a similar influence ACTIVELY.

But, again, in the pathological argument it was pointed out that the circulation was most embarrassed when hypertrophy of the left ventricle co-existed with dextral valvular lesion. Hypertrophy of the left ventricle, if unassociated with mitral insufficiency, is probably in most cases unassociated with any considerable degree of ventricular dilatation, and may, under such circumstances, be associated with some diminution of ventricular capacity. Such a condition is more likely to accompany left ventricular hypertrophy in cases of dextral valvular disease, than in those cases in which disease of the valves of the arterial heart constitutes the chief lesion; for, in the former, there is not only the long tract of systemic venous and arterial vessels intervening between the hypertrophied left ventricle and the site of the capital defect, and which, doubtless, offer a considerable resistance to the retrograde pressure from the venous, and thus share the work of the arterial heart, but the defective pressure in the pulmonary circuit, from the dextral valvular incompetency, causes less blood to enter the left ventricle. This chamber, then, under these circumstances, is protected in a twofold manner from a dilating influence, which is unfettered, and in fact exaggerated, in cases of sinistral disease.

It is rational, therefore, to suppose that hypertrophy of the left ventricle, arising from disease of the pulmonary and tricuspid valves, must in most instances, and for a considerable period, be unassociated with dilatation, and probably coupled with diminution of the capacity of that chamber. The result of this, as we have seen, would be to aggravate the distress of the patient, and if our argument be valid, Dr Fothergill's dictum, that accessory growth is our warrant for the employment of digitalis, would be an instance of "imperfect induction," for we have here an exception to the rule, as the systolic influence of digitalis, by still further reducing the capacity of the ventricle, would merely facilitate retrograde engorgement.

Finally, when we consider that, in consequence of dextral valvular deficiency, one of the forces for propelling blood through the pulmonary circuit is seriously impaired (and results, as we have endeavoured to show at page 112, in one form of pulmonary congestion), it would evidently be mischievous to diminish the size of an undilated left ventricle by digitalis, the effect of which would be, as is shown by Dr Fothergill's experiment on the sparrow, and by the statements of others, to render it more difficult for blood to pass through the lungs from the venous to the arterial heart. Whether digitalis would be of service where the left ventricle is dilated in connection with a dextral lesion, it is difficult from lack of experience to say, but the failures I have referred to when it has been used with a sinistral, coupled with a dextral valvular defect, permit us to doubt whether, under any circumstances, this drug can be employed with benefit when we have an organically disabled venous heart.

A left ventricle, then, of normal capacity appears to be the most desirable associate of a right ventricle maimed as to its valves; because in most cases it signifies that the compensatory changes in the venous circulation have been adequate to the necessities of the economy, while at the same time its own peculiar functions have in no way been deranged by any deviation from its normal capacity and power. How delicately the balance is adjusted may be gathered from the unmistakable manner in which it was upset by the comparatively small and carefully administered doses of digitalis employed in the case of E. W. G. M.

From the foregoing argument it is now permissible to infer that the systolic influence of digitalis upon the left ventricle is, if not the only, probably the chief element of danger in the exhibition of that drug in cases of organic valvular disease of the right heart; and additional probability is lent to this view by the fact that pulmonary hæmoptysis was noted for the first time, during the course of the case reported by me, while the patient was under the influence of digitalis.

Functional valvular incompetency of the tricuspid valve is the result, as we have seen, of over-dilatation; and digitalis (the *rationale* of the action of which, under such circumstances, has been already indicated), in so far as it can correct such a condition and restore the competency of otherwise healthy valves, is a remedy of great value, and, carefully administered, may prolong life for a time after what may be considered (especially in chronic cases) the knell of dissolution has been sounded by the appearance of tricuspid regurgitation.

The therapeutic conclusions, then, at which we have arrived are briefly as follows:—

(1.) That a more or less orthopnoeic position is best suited to many cases of organic valvular disease of the dextral valves; but that there are exceptions to this rule, and that the latter will probably most frequently be constituted by cases of pulmonary valvular lesion, and especially by cases of pure pulmonary regurgitation, just as we find a recumbent position best adapted to the analogous instances of aortic regurgitation.

(2.) That the cutaneous circulation must be maintained by adequate warmth, and arterialization of the blood by as free a ventilation as is compatible with the maintenance of sufficient heat.

(3.) That food must be given to patients from dextral disease under the same restrictions as in the case of other cardiac sufferers, but that fibrinogenous material must be even less consumed than in other cases, from the greater liability to spontaneous coagulation, and that alcohol, in one form or another, is absolutely necessary, but must be cautiously administered.

(4.) That venesection is calculated to render signally good service in the retrograde plethora due to dextral valve lesions.

(5.) That external applications must be employed in such cases, under the same circumstances as in other forms of cardiac disease.

(6.) That the use of ammonia, from properties peculiar to it, is indicated, but that asphyxial conditions may render its combination with chlorate of potash or some other oxygenator advisable.

(7.) That the employment of digitalis is not only useless in cases of organic disease of the dextral valves, but fraught with a danger which cannot be exaggerated, and that the chief cause of its pernicious influence is probably its systolic action upon the left ventricle.

(8.) That in functional valvular disease of the right heart, arising from ventricular dilatation, and especially in functional tricuspid regurgitation, digitalis carefully administered may prove very beneficial by diminishing the capacity of the ventricle, and restoring or improving the competency of valvular action.

## ARTICLE V.—*Vaccination Notes and Recollections.* By JOHN BALFOUR, L.R.C.S. Ed.

HAVING lately had occasion to perform vaccination on a grown-up lad, I watched the case with interest which may perhaps be shared by others of the profession.

J. S. N., above sixteen years of age, was not vaccinated as a baby, partly on account of delicate health, partly because his father was a strong antivaccinationist. Having become a candidate for appointment as a post-office runner, a certificate of vaccination was required, and he came to me to have it done. On the 27th December 1879 I performed the slight operation from a tube of fresh lymph. On the 3d January (the eighth day) I found four beautiful pearly vesicles containing clear lymph, with a fair blush round them. Next day the blush had extended; there was a distinct areola; the arm was painful, and two of the axillary glands were swollen. On the sixteenth day all uneasiness had gone, and the axillary glands were normal. Three of the crusts had been torn off from the intolerable itch, but the fourth was firmly adherent; this he was directed by no means to touch. On the twenty-third day all the crusts off, the last yesterday; the marks clear, distinct, and well foveated.

A good deal is said nowadays about the necessity for a change of lymph, having recourse to the calf for a fresh supply, but from my own experience I look on this as unnecessary. When a student, now fifty years ago, I paid a good deal of attention to this subject, and as far as I can judge the vaccinations of the present day are quite as typical and satisfactory as the old ones. On commencing vaccination here I obtained a supply of lymph from the Edinburgh Vaccine Institution, and though, from sudden demands from friends and other causes, my stock once or twice was so nearly exhausted that I applied for more, yet I never required to use the new, so that what is at present in use is the direct sequence of thirteen years, and it is as good and effectual as can be wished. It may be thought egotistical if I mention my plan of vaccinating; but as it is successful and gives little pain, I run the risk. By choice I vaccinate my babies about the third month, before teething commences, and take the lymph from an eight days' vesicle, using a sharp lancet. Its point is well loaded with lymph; it is held at an acute angle to the skin of baby's arm, and three or four slight incisions are made within the size of a threepenny piece. This is repeated to the fourth time, making in all from twelve to sixteen punctures. The whole is done so quickly and with so little pain that in children of ordinary sensibility a cry seldom comes before the last, and sometimes not even then. The great aim is to insert the lymph and draw as little blood as possible. When, from the skin being very tender, more blood flows than usual, I presently wipe it off and apply a fresh supply of lymph over the punctures. Done in this way from the fresh arm, failures are very few, perhaps one in forty or fifty. To carry my tubes I use a large goose-quill cut as long as possible, and secure the end with a small wad of cotton. This carries safely twelve or fifteen tubes, and fits comfortably into my pocket dressing-case.

Only on two occasions during my long experience have I seen anything like a mishap from vaccination; both were cases of erysipelas. The first came on about the fifth day. Perhaps the home of the child was in fault, as it was low, damp, and ill ventilated. At any rate, another child vaccinated at the same time and from the same baby had everything normal, so proving that the lymph was not in fault. In the second case the erysipelas commenced about the eleventh day, the vesicles up to that time having been quite normal. The erysipelas affected the elbow and fore-arm, and was caused, I think, by exposure to cold. Both cases did well under pretty free doses of the tinct. ferri muriat.

I am a firm believer in the protection given by vaccination. I was vaccinated as a baby, and still have two good marks on my arm. Though much exposed to small-pox, both on board ship and in India, I never suffered; and I have allowed my wife and her sister to nurse a lady suffering from small-pox, with two of my own children in the house also, without bad effect. As to the general good result of vaccination, how many deeply-scarred faces, some of them with only one eye, some altogether blind, do I remember long ago! Such cases are becoming daily more and more scarce, and will perhaps be regular curiosities in the next generation. But they who oppose vaccination cannot realize what the disease is in this country, where nowadays so few are totally unprotected. To know it in all its hideousness, let them consider the statistics of an outbreak in India or in any other unprotected country; or, better still, let them go and see it,—not a very difficult thing in these days of rapid and easy locomotion,—and let them consider that of those taken ill at least forty per cent. will die, and that of those who recover many will lose the sight of one or both eyes, or have their visage so marred that their own mothers would not know them. Even the disfiguration is bad enough. We read that in our own country, before Jenner introduced the grand remedy, it was feared by the young and handsome almost as much as death itself. And all this loss of life and loss of looks can be averted by a few scratches of a lancet on the arm of a baby, followed by two or three days' restlessness not worse than that caused by a fit of teething.

## ARTICLE VI.—*Laryngismus Stridulus, or Tetany.* By JOHN HADDON, M.A., M.D., Manchester.

IN an out-of-the-way corner of the *British Medical Journal* of June 28, 1879, among the answers to correspondents, I read the following case :—

" W. J., a boy nine months old, suffered at an early period after birth from diarrhœa; this, however, under treatment, soon ceased, and the child became apparently strong and healthy. At the age of five months he was seized with (chronic) bronchitis, from which he also recovered. Soon after this time the mother remarked a symptom which she had not previously noticed, and which alarmed her very much, viz., that the infant, on awakening from sleep, or immediately after, had the respiration suddenly suspended. The attack, however, soon went off, and was generally mild in the commencement, but after the lapse of some time the paroxysms became more severe and frequent. The breathing was now completely suspended, the eyes fixed, hands cold, the thumbs contracted, excretions involuntary, the face expressive of great anxiety, pale, and at times purplish, and the body convulsively bent backwards. After one or two minutes the child recovered from the attack, drew a few full inspirations, and then uttered some painful sharp cries, after which he became gay, playful, and apparently well. There were no catarrhal symptoms present. The treatment pursued consisted of local bloodletting, cutaneous revulsives to the back and front of the chest, small doses of calomel and rhubarb, in addition to antispasmodic and other similar means, regulated, of course, by the strength and constitution of the child. This treatment at first seemed to be attended with beneficial effects; the paroxysms were suspended for one week, but soon returned with increased violence, even every one or two hours. The usual remedies were given, without any amelioration, and after a lapse of two days the child was carried off in a paroxysm between suffocation and apoplexy, without any convulsion.

" I saw the child in the last attack. The disease was characterized by accesses of spasms in the air passages, the respiration was completely suspended, and I observed only a wheezing, very fine, small and imperfect inspiration, an embarrassed passage of the air through the rima glottidis, which was spasmodically contracted in the highest degree. The tone had a certain analogy with the crowing inspiration of hooping-cough, but it was much finer, higher, and less deep. The closest analogy I can find for it is in the spasm which frequently attacks hysterical women. I also observed that when the child was free from attack the lumbricales and the abductors of the thumbs became spasmodically contracted, and gave the hand an appearance of deformity. The pulsation of the heart could scarcely be felt. No post-mortem was allowed."—(A. J. V., in *British Medical Journal,* June 28, 1879.)

The writer states his belief that the disease had not been previously described, and asks some of the members of the Association to give him their experience as to such cases.

In the same Journal for July 12, 1879, a member takes notice of the above case, and says it was evidently one of false croup, or laryngismus stridulus, or child-crowing. He adds, "Had bromide of potassium in five-grain doses been administered, together with Parrish's food, the child would in all probability have recovered; at least, I have not found the disease a fatal one."

From these remarks one would infer that the writer had met with such cases frequently.

I was interested in the case recorded by A. J. V., as I had, some time before, been puzzled by a similar one, of which the following is but an imperfect account:—

A male child, born in Brooklyn, was quite well until ten months of age, when, on June 12, 1878, he was seized with vomiting, followed by purging. He was very ill for three days, suffering from the common complaint in Brooklyn at that time, summer diarrhœa. His bowels continued to act too frequently even in August, when he sailed for England. His mother says he has had a peculiar way of crying since he first cried, looking at times as if he would choke, and getting black in the face before he cried properly. He was in Wales from September to December 1878, and his bowels still continued to act too frequently. He came to this neighbourhood on December 15, 1878, when he seemed to get cold. I saw him, and found sibilus in both lungs, with some cough, but he soon got over that, and I ceased attendance. At this time his bowels were much better. I was again consulted in the middle of January 1879, when his mother told me that since I had seen him he had begun to make a peculiar crowing noise when irritated, as if attempting to cry and could not, until he made a shrill noise with inspiration. His motions were now natural. I did not witness any of the characteristic attacks, but his mother said they came on when he was irritated by his brother, in the middle of the night, and also on awakening in the morning, when he had nothing to disturb him. In the worst attacks he became quite rigid, and his back arched as in opisthotonos, his breathing being suspended; but when the spasm passed off he was soon all right again. These attacks puzzled me much, and after trying different remedies I had recourse to bromide of potassium in ten-grain doses. So soon as he began that drug the attacks became less severe and not so frequent, but he continued to have them slightly until June, when he went to Wales. He had had no medicine for a week before going, and the night he reached Wales he was very much troubled with the attacks, and for three weeks afterwards his mother said he had slight noises in his throat at times. His skin was covered with a rash in July, which his mother calls hives, and since then he has never had an attack.

That is the only case I have met with, during twelve years general practice, which seemed to me at all to resemble what has been termed laryngismus stridulus, although I have been looking out for such a disease since I began practice, having had my attention very painfully directed to the subject, while I was yet a medical student. From recent discussions, it is probable that one disease affecting the larynx, and hitherto called croup, may be swallowed up in the more comprehensive term diphtheria; and if laryngismus stridulus could also be removed from our nomenclature, we would then have left the diphtheritic exudation, and laryngitis as the only acute diseases which we might expect to meet with, in the larynx. With the view to assist in this desirable simplification, I would call attention to the great similarity between the symptoms, and the treatment of what has been called laryngismus stridulus, and tetany. Dr Ley published a long essay on laryngismus stridulus in 1836, from which I give the particulars of a case observed by himself as characteristic of the disease.

"The child had been recently weaned, was much reduced, and skinny. It had been somewhat feverish; the excretions from the intestinal canal were faulty, and already over abundant. The child followed with obvious pleasure a candle in its movements. The pupils yielded to strong light, but were large and sluggish. The medical attendant had observed some squinting, with slight and occasional contractions of the thumb and fingers into the palm of the hand. It had experienced, too, frequent attacks of the crowing inspiration, at which times it was said to have been convulsed, but upon minute inquiry the fit appeared to have been merely a vehement struggle for breath, in which the features were distorted with agony, the limbs rigidly extended, and the trunk arched backwards, so as to constitute an approach to opisthotonos; but he could not learn that there had been any vehement alternate contractions of antagonist muscles, such as constitute the true chronic convulsions of morbid excitement within the cranium, nor had the fit been followed by somnolency."

Such is Dr Ley's account of a case of laryngismus stridulus.

Now take a case of "tetany" in a child 21 months old from Trousseau's lecture on that affection.

"Soon after birth she had violent attacks of eclampsia, and was still subject to partial convulsions, consisting in spasmodic trembling of the upper eyelid and the globe of the eye, sometimes in spasm of the glottis, which came on under the influence of emotion or of a feeling of annoyance, and was characterized by a prolonged and whistling inspiration. Contractions of the extremities were very marked; the thumb was forcibly adducted and flexed into the palm of the hand, underneath the fingers, which were pressed against one another. The child was of weakly constitution, and was suffering from membranous ulcerative stomatitis, and she had also had for the last nine months a cough, which for some time past had assumed a convulsive character."

Such is tetany, according to Trousseau, in a child; and I submit that A. J. V.'s case, my case, Dr Ley's case, and Trousseau's case, allowing for imperfections in observation or description, constitute examples of a disease characterized by the same symptoms. The pathology of laryngismus stridulus has always been obscure; so also has that of tetany; but both are recognised as due to some affection of the nervous system. Both seem to follow exhausting ailments, such as diarrhœa. The nervous symptoms of both, can be arrested by bromide of potassium, and the general health being improved, the symptoms do not return in either case.

Having thus attempted to simplify our nomenclature, I commend the consideration of the subject to those who have more opportunity for observation than I have.

## ARTICLE VII.—*The Protection Bed and its Uses.* By W. LAUDER LINDSAY, M.D., F.R.S.E., Late Physician to the Murray Royal Institution, Perth.

(*Continued from page* 619.)

AT the meeting of the American Association of Asylum Superintendents in 1874, Dr Ranney, of the Wisconsin Hospital for the Insane at Madison, said—"In cases of suicidal patients such restraint as is implied in the use of the *covered bed* or crib seems to me eminently appropriate at night. It affords a full equivalent for watching or other supervision, and it is less liable to abridge sleep than any other measures affording the needed security."[1]

Illustrations of the mischievous results of the *non-use* of some form of protection bed in cases in which its employment is obviously indicated, are simply innumerable, and are of incessant occurrence in all parts of *England*.

In the first place, its non-use offers endless facilities for self-injury; and in the second, it exposes unfortunate patients to the violence—necessary in many cases, it may be, in the absence of mechanical restraint—of attendants. One simple form of the latter source of injury is the forcible dressing of patients, who

[1] As quoted in the *Journal of Mental Science*, vol. xxii. 1877, p. 146.

should be allowed to remain undisturbed in bed. In English asylums it appears to be a common ambition of superintendents, in order, apparently, to ingratiate themselves with Lunacy Commissioners, to have a minimum number of persons *in bed* for any cause; the result of which ambition is that poor feeble creatures, who ought never to be out of bed, or at least never raised from bed, dressed, and made to sit among the stronger and more or less unruly occupants of a sitting-room or gallery, are compelled to figure, for appearance' sake, among the rank and file of the vigorous. Under such circumstances the said Commissioners issue congratulations "all round," telling us in their blue-books that only some trifling percentage of patients were found in bed in a given asylum—not connecting this fact in any way with that other fact, which may appear in another part of the very same official "entry," and which refers to the large mortality.

I have been many a time both grieved and disgusted in passing through the wards of English asylums—which English lunacy authorities never tire of telling us are the best in the world—to see scores of pallid, thin, motionless "objects" sitting on benches or in arm-chairs, obviously taking no interest in anything, having no kind of enjoyment in life, the power of sensation being scarcely left to them. Much better is it to see the restless, mercurial inmate of an American asylum pacing ward or grounds, with his hands restrained by the camisole or some of its substitutes, and when exhausted, tranquilly sleeping in his protection bed. In the one case there is life and hope, in the other apparently no hope but of and in death.

In all probability such injuries as are described in the *British Medical Journal* for 1876 (vol. ii. p. 246), in a leader on the "Alleged Ill-treatment of Lunatics," would not occur were such appliances as protection beds employed in proper cases. Regarding the result of a coroner's inquest in one case of fatal injury attributed to *attendants*, we are told that there were "twenty-one ribs fractured, an ulcer in the stomach, and a hole in the peritoneum," which hole, further, is described "as due to *force*, and not to disease. . . . . The lower ribs had been broken by *great violence, such as blows or kicks*, and the upper ribs by indirect violence. *Violence repeated from time to time* would *re-break* the ribs, and he (one of the medical witnesses) found some of them had been re-broken. The ribs were not exceptionally brittle, and one of the broken ribs which had become re-united required a considerable amount of force on witness's part to re-break it. . . . . He should think the fracture of the breastbone was caused by some one *kneeling* upon the deceased. Fractures of the breastbone were very rare, and in nearly all cases occurred from direct violence."

A reviewer in the New Sydenham Society's *Retrospect* for 1869–70, of a whole series of cases of *rib-fracture* in the insane, found "that the existence of most of these fractures has only been discovered *after death*; that the fractures have nearly all been *very extensive*. He then states that "paretic patients, in a certain stage of their malady, are known to be furiously excited. They *throw themselves about with reckless violence.* They frequently attack the bystanders, and they thus often become engaged in *scuffles.* They are consequently exposed to *all kinds of blows and falls.*"[1]

The common-sense inference from such records of "accidents" is, that all these fatal injuries might surely have been easily *prevented* by the simple expedient of confining the patients to bed.[2] But, in the present state of public opinion in England anent the "liberty of the subject," the fruits of which opinion are the wholesale murders and suicides, with other social evils innumerable, that are chronicled in every newspaper, and with the mischievous leaven of Conollyism operating among all classes of its lunacy authorities, it is hopeless to expect any material decrease in the number and magnitude of such asylum catastrophes as too frequently form the subject of English coroners' inquests. It is not the less incumbent on us, however, to protest as emphatically as may be against the *manufacture of preventible accidents*—against what is virtually the artificial creation of preventible fatality.

In a paper on "General Paralysis of the Insane," Dr Boyd, one of the ex-presidents of the Medico-Psychological Association, thus speaks[3] of two cases:—

1. "Very noisy and violent; had to be placed in the *strong room.*"

2. "Had picked sores on his face and hands. . . . Cannot be induced to wear stockings. . . . Prefers laying on the floor to his bed."

The late Dr Mercer of the East Riding Asylum, Yorkshire, gives a case in the *British Medical Journal* for 1874,[4] in which "there was no reasonable explanation of the cause . . . of an important fracture of the chest . . . but the patient's own restlessness. . . . His case was at once diagnosed as one of general paralysis in an advanced stage. . . . He got out of bed in the night-time, and rambled about the room; and a fellow-patient described how, in the course of this restlessness, he *fell rather heavily and helplessly.* . . . He was found by the night attendant out of bed, tottering about the room. His powers of locomotion . . . were becoming much more feeble, and his tendency to *fall heavily* was increasing in an alarming degree. . . . He was considered no longer safe in any other than the padded room, and thither he was accordingly carried. Although there was then no injury discoverable upon him, I still consider it quite a probable event that, during his past restlessness, he might have suffered some hurt. . . . After he had been two days an inmate of the padded room, a bruise on the right side of his chest . . . . was pointed out to me by his attendant. . . . While in the padded room he tossed and tumbled about a good deal. But there was no evidence—as indeed so complete was the padding there was scarcely any possibility—of his having sustained an additional bodily injury while there." On post-mortem examination, however, "a transverse fracture of the manubrium of the sternum" was discovered. "*Fracture of the sternum* is a form of injury very rarely witnessed by the busy general practitioner, and when it is seen, I think I am correct in saying that it usually springs from the application of some strong *mechanical violence*, such as a cart-wheel passing over the chest. It is also a very grave accident, occasioning much anxiety in its treatment." In this case the medical witness at the coroner's inquest "gave it as his decided opinion before the jury that, with such a friable condition of the bones . . . some very *trifling* cause —as, for instance, a *fall* on the floor, which the patient was known to have sustained, and which would not have hurt a healthy person—would be quite sufficient for the production of the fracture. If this patient, instead of having been no earlier than was necessary put into the padded room, had received only such care as would be implied in allowing him, restless and helpless as he was, to knock and tumble about an ordinary bedstead, the discovery of *many additional fractures* of the chest, with their common attendants of penetrated pleura, pleuro-pneumonia, and empyema, would have been a more than probable event."

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[1] Quoted in the *British Medical Journal*, vol. ii. for 1876, p. 247.

[2] Such a case is to be found in the *Lancet*, vol. ii. for 1870, p. 323, in the death of a general paralytic with fractured rib.

[3] In the *Journal of Mental Science*, vol. xvii., 1872, pp. 12, 13.

[4] In a paper on "General Paralysis and Fragilitas Ossium," vol. i. for 1874, pp. 540–1.

"As a principle of practice, then," Dr Mercer goes on to say, "the case illustrates how indispensable are good *padded rooms* in sufficient number for the proper equipment of an asylum."

The inference which I draw from Dr Mercer's instructive facts is, however, not that padded rooms are essential appliances of a good asylum, but that protection beds are. It is at least a singular coincidence that it is just in England where *padded rooms* are most frequent, that *broken bones* are even more so![1]

Again, the *Report of the Friends' Retreat, York*, for 1870 (p. 12), speaking of a case of hysterical mania, remarks that "the safety of the patient required for weeks the united service of *four*, and sometimes *six*, *attendants both day and night*." Now, not only is this an expensive service, not only are few asylums possessed of such a staff as to afford such a measure of attention to *one* patient, but, as may be illustrated by every annual blue-book of the English Lunacy Commissioners, it is precisely in and at the hands of *attendants* that "accidents" are most apt to happen to asylum patients.

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[1] *Vide* article on "Rib-fracture in English Asylums:" *American Journal of Insanity* for July 1879.

In some asylums, such troublesome unmanageable patients are placed in the "padded" or "strong" rooms, where they are at perfect liberty to do themselves fatal mischief of various kinds. The late eminent Dutch physician, Professor Schroeder Van der Kolk, who ridiculed "non-restraint" in acute mania as both unscientific and harmful, rendered padded rooms unnecessary in any of the Netherlands asylums by introducing into them what he called "confining chairs."[1]

Dr Blandford, of St George's Hospital, London, in his *Lectures on the Treatment, Medical and Legal, of Insane Patients* (1871, pp. 208 and 210), recommends *mechanical* restraint in a chair during artificial alimentation as preferable to the application of *manual* restraint, regarding it as at once more efficacious and less liable to lead to injury. In other words, he makes use, as so many of his *confrères* in all parts of the world do, under similar circumstances, of what may be called a "confining chair" for the time being.

He says: "Compare a patient struggling for fifteen to thirty minutes in the hands of three or four attendants with one fastened with sheets in a chair for five minutes. Let both be *seen* before judgment is passed."

Again, speaking of exhausted melancholiacs, he remarks (p. 211) —" Rather than run any risk of exposure, I would employ mechanical restraint, and fasten them in bed"—and very properly.

It must be obvious, however, that if an experienced physician like Dr Blandford finds the risk of accidents great from the restraint of *attendants*, in his own presence, during the day, and for only fifteen to thirty minutes, it must be infinitely greater where a patient has to be entrusted to the care of attendants night and day for weeks or months consecutively; in which case the risks are equal, whether the unfortunate invalid is by force kept in bed, or permitted to wander about out of it.

In certain states insane patients "wear themselves out with incessant and fatiguing exertion. . . . . . It is *exhaustion* that kills in such cases," says Dr Blandford (p. 228). And no doubt it does, if it is permitted. But ought it to be permitted by any physician with the slightest pretension to either common sense or common humanity?

In 1871 there was an inquiry at the Sheffield Police Court concerning an alleged "Shocking Outrage on a Lunatic" in the lunatic wards of the Union Workhouse of that city. It was stated that "she was a raving lunatic when admitted, and was tied down in bed."[2] And there is ample evidence to show that this is the ordinary treatment, not only of maniacs, but of cases of delirium tremens, fever delirium,[1] and other forms of delirium, in general and special hospitals, as well as in workhouses, throughout England.

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[1] Translation of his work on *Mental Diseases* by Dr Rudall. London, 1870. p. 50.

[2] *Daily Telegraph*, November 16, 1871. We are told, too, that, "although she was in a sickly state, a strait-jacket was placed on her."

Between the tying down in bed in such cases, and leaving the patient thereafter, unless at long intervals, unattended, and the application of the protection bed in well-appointed sick-rooms, there can, I think, be no proper comparison.

Some of the curious uses to which *padded rooms* and the mechanical force of *attendants* are applied in the professedly "non-restraint" asylums of England, may be gathered from the following account voluntarily given to me by the superintendent of one of the best known of them in 1876:—

"Miss —— (an attendant) has often sat in a padded room holding a troublesome patient. At other times there were two nurses in the room holding the patient. She has also sat outside the padded room door to keep the patient in the room, and frequently another patient has been placed at the same door for the same purpose" (instead of an attendant, I presume). "This is not considered *seclusion*, and is not recorded as such" in the books which the Lunacy Board requires every public asylum to keep.

Moreover, "Miss —— has sat holding a troublesome patient on each side of her on a seat in the day-room, with another excited patient at her feet on the floor, her (the attendant's) foot holding down the patient's dress to prevent her rising. All these *tricks* are known to the superintendent. But they are neither seclusion nor *restraint*," their object being to prevent the use, in proper cases, of any form of either seclusion or restraint. Whatever be the effect of such "tricks" upon patients, they have a demoralizing effect upon attendants, who, in their disgust at proceedings which even they consider underhand and dishonourable, not unfrequently take the earliest opportunity of seeking service in some "restraint" asylum. Nor are Lunacy Commissioners always, or perhaps often, imposed upon by such disingenuous *ruses;* for they have themselves described them to me in terms of loathing.

## ARTICLE VIII.—*Quarterly Report of Royal Maternity and Simpson Memorial Hospital.* By J. HALLIDAY CROOM, M.B., F.R.C.S.E., Ordinary Acting Physician to the Hospital; Lecturer on Midwifery, School of Medicine, Edinburgh.

(*Read before the Obstetrical Society, 12th November* 1879.)

IN compliance with an understanding come to at a recent meeting of this Society, when it was arranged that each Ordinary Physician should give an account of his three months' term of office at the Maternity, I now beg to submit the following report:—

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[1] Where some such means of restraint are not resorted to, we have to deplore such "accidents" as the suicide of Dr Brunton of the Paisley Infirmary in 1876 (*Vide British Medical Journal*, vol. ii. for 1876, pp. 698, 697, and 663).

During the three months ending 31st October there were 47 intern cases and 114 extern cases.

In offering a report upon these cases, it is desirable to look at the two groups of extern and intern cases separately. My reason for this division is that any data derivable from the extern practice of the Hospital I believe to be of comparatively little value. The cases are attended by junior students and nurses, and it is but rarely, and only when some complication has arisen, that the physician on duty, or resident, sees the case. I therefore leave till the end a brief report of the outdoor cases. The intern cases will be examined under the respective heads of Pregnancy, Parturition, and Puerperium.

### I. Pregnancy.

The short period during which patients remain in the Hospital previous to their delivery renders any extended observations impossible. Of the 47 cases, 26 were multiparæ, 21 were primiparæ.

The numbers were as follows:—I. paræ, 21; II. paræ, 17; III. paræ, 4; IV. paræ, 2; V. paræ, 1; VI. paræ, 1; XI. paræ, 1.

One case of gravid retroversion between the second and third months occurred, in which reposition and retention were easy and satisfactory.

One case of salivation during the last six weeks of pregnancy was admitted; and as it presented some points of interest, perhaps I may be allowed to give it in detail:—

Barbara Swanston, II. para, was, after a normal pregnancy, naturally delivered of a living child six years ago. Two years after her last labour she underwent an operation for ranula. She again became pregnant, and until the last six weeks the progress of her pregnancy was normal. For five weeks previous to admission she suffered constantly from vomiting and salivation. During the four days she remained in Hospital previous to delivery she retained scarcely any food, and the amount of saliva excreted varied between 20 and 30 ounces daily. It is well known that vomiting and salivation are usually met with in the early months of pregnancy. Once set agoing, they may persist all through utero-gestation. In this patient, however, they were developed between the seventh and eighth months, suggesting the possibility of over-distension of the uterus by twins or hydramnios. The ptyalism continued uninterruptedly till the evening of the 20th, when, without any cause, and previous to the onset of labour the membranes ruptured, and the liquor amnii slowly drained away. The vomiting and salivation ceased immediately. Labour set in eighteen hours subsequently, but from the first escape of liquor amnii the symptoms entirely ceased. Although it was impossible to estimate the amount accurately, yet the liquor amnii was much in excess of normal.

The patient having previously suffered from some affection of the sublingual gland affords a ready explanation of the peculiar liability, in this special case, of the salivary glands to sympathetic irritation. Further, the presence of hydramnios is sufficient explanation of the occurrence of ptyalism in the later months. And, again, the instant cessation of the symptoms on the first slight escape of liquor amnii is a strong argument in favour of the proceeding advocated by Playfair, viz., to aspirate the amnionic sac, in cases of hydramnios, with a fine needle.

Two cases of marked chloasma—developed over the brow, malar bones, and one cheek in one, and nearly the entire face in the other—were admitted, and in both the pigmentation gradually diminished during the puerperium. In both cases the ordinary pigmentation in the usual sites was unusually deep.

One case of scoliosis. The patient presented a right lateral curvature of the spine. On examination the pelvis was found normal, and the labour ended naturally.

## II. PARTURITION.

There were 47 children born, of whom 27 were males and 20 females.

The classification of the labours was:—37 natural labours, 6 preternatural labours, 4 complex labours.

Of the 37 natural labours the positions of the vertex were:—Left occipito-anterior, 25 ; right occipito-posterior, 12 ; left occipito-posterior, 0 ; right occipito-anterior, 0.

One street birth occurred, in which the position of the vertex was not ascertained.

The relative frequency of right occipito-posterior positions is in excess of the ordinary. Relative frequency in multiparæ and primiparæ:—Primiparæ, 5 ; multiparæ, 7.

No primary case of right occipito-anterior position occurred, although the position as a secondary one, viz., as a transition from right occipito-posterior, was frequently observed.

In every case the forward rotation of the occiput took place, except in the labour complicated with eclampsia, in which the occiput remained persistently posterior. In two cases forceps were found necessary,—in the case just mentioned, in which they were employed to shorten the labour owing to the eclampsia, and not owing to the position of the head, and in a case, about to be described, of placenta prævia.

*Six preternatural labours took place.* They were all breech cases. The positions were:—Left sacro-anterior, 3 ; right sacro-posterior, 2. In one case the fœtus was premature and putrid, and the labour so far advanced before examination that the position could not be ascertained.

*Four complex labours.*—Placenta prævia, 1 ; twins, 2 ; eclampsia, 1. The placenta prævia was partial on the right side. The hæmorrhage was very profuse. Before being admitted, the vagina had been plugged by the resident. On admission, the os was dilated as large as the rim of a teacup, membranes ruptured, head presenting and well down. The indications for management were therefore obvious—application of forceps—and patient did well.

*Two twin cases :*—One at full term. Age of mother, 21. Primipara. *Presentation*—Both head, L.O.A., R.O.P. *Placenta*—Two placentæ. Membranes separate ; united by merest tack of chorion. *Children*—Both males. *Interval*—1 hour 38 minutes.

One premature, eight months. Age of mother, 22. Primipara. *Presentation*—Head, breech. *Placenta*—One placenta. Common chorion. Two amnions. *Children*—Both males. *Interval*—22 minutes.

*Eclampsia.*—A multipara, æt. 27, was sent to Hospital in advanced labour, with eclampsia. The head, face to pubes, was on the floor of the pelvis, and the patient in a violent convulsion. She was placed under chloroform, the urine drawn off, and was delivered with forceps. The urine contained blood, one-fourth albumen, and granular tube-casts. As the bowels were loaded, a purge of croton oil was administered, and diaphoresis kept up by the exhibition of one-sixth of a grain of pilocarpine. The patient kept under the influence of chloral and bromide of potassium for two days. There was no return of the eclampsia, and the patient made a good recovery.

Forceps were used twice :—1 Placenta prævia, 1 eclampsia.

*Mortality.*—Maternal, septicæmia, 3 deaths. Fœtal, 5 still births. Infantile, 8 deaths—premature birth, 5 ; atelectasis pulmonum, 1 ; syphilis, 1 ; defective nutrition, 1.

## III. PUERPERIUM.

Of the 47 women delivered, 35 completed the puerperium without any abnormal symptoms, or at least with an inconsiderable and occasional increase of pulse and temperature.

The remaining 12 had complications more or less severe :—6 pelvic peritonitis ; 1 acute general peritonitis ; 2 melancholia ; 3 puerperal septicæmia.

During the month of August six cases of pelvic peritonitis were developed, which, though smart, were of short duration and favourable in their termination.

There was one case of general peritonitis, which also ran a short course and had a favourable termination.

Two cases of acute melancholia occurred, in both of which the nervous symptoms passed off before dismissal.

In three cases the perineum was torn—in two to the verge of the anus, and in the third to within half an inch. In all the cases stitches were introduced immediately after delivery. In two there was complete union. The third did not heal, owing to the unhealthy and syphilitic condition of the parts.

In one case, where the tear was to the verge of the anus, there was retention of urine, which lasted for several days, requiring the use of the catheter.

It would be beyond the scope of a report such as the present to give any lengthened description of all the important cases; but the three following, in which the termination was fatal, deserve special notice:—1. Eliza Mackenzie. 2. Elizabeth Fisher. 3. Mary Manzie.

Case I.—Eliza Mackenzie, æt. 23. First pregnancy. Last catamenia began in October, ended 4th November 1878. No miscarriages. Admitted 8th August 1879. Delivered 10th August 1879, at 7.57 p.m.

*Labour.*—1st stage, 52 hours; 2d stage, 1 hour 85 minutes; 3d stage, 23 minutes.

*Position.*—Left occipito-anterior. Female child, weighing 7 lbs. 4 oz. Alive.

*After Progress.*—*10th August.*—During the third stage she complained of great pain over the uterus. Immediately after delivery her pulse was found to be 130 per min.

*11th August.*—Spent a restless night, and at 6 A.M. her pulse was 170, temperature 102°·6; at 10.30 A.M., pulse 126, temperature 100°·2; 8.30 P.M., pulse 140, temperature 101°·6. Respirations, 34 per minute. As pain was present over the lower part of the abdomen, she was blistered, and poultices were applied. One grain of opium was given at 4 P.M., and ♏iiss. of tincture of aconite ordered every hour and a half. At 10.30 P.M., temperature 101°·6, and respirations 42. Ordered 1 gr. of opium and ♏v. of spir. terebinth rect. in a little milk every two hours. Poultices and aconite to be continued.

*12th August.*—At 6 A.M., pulse 140, temperature 101°. 1 gr. opium administered. At 10·30 A.M., pulse 142, temperature 100°·2. The pain over the abdomen is very intense, and greatly aggravated by a cough caused by bronchitis, from which she was suffering on admission. To get ℞ Ammonia carb. ℈j., Spir. chloroformi, Tinct. card. co. āā ʒss., Syr. tolut. ℥iss., Decoct. senegæ ad ℥vj. Sig. ℥ss. quartis horis; and supposit. morphiæ gr. $\frac{1}{4}$ every 4 hours. A leech was applied to either groin, and the blister repeated. Turpentine stopped. Ordered tinct. ferri perchlor. ♏xv. every 2 hours. Respirations 44. 8.30 P.M., pulse 154, temperature 100°·4. 10 P.M., discontinue the aconite. To get ℥ss. of brandy every two hours.

*13th August.*—At 2 A.M., face being very flushed, no more brandy was given till 6 A.M., when a $\frac{1}{4}$ gr. morphia suppository was also given. 10.30 A.M., pulse 120, temperature 99°·7. Patient seems much better. Improvement continued during the day, but at 8.30 P.M. vomiting began. Pulse 140, temperature 101°·4. Great pain over the abdomen, aggravated by the coughing and vomiting. Ordered ¼ gr. morphia suppository, followed by another at 9 P.M. Brandy was given in small doses every quarter of an hour; but as she, after a time, failed to retain it, subcutaneous injections of sulphuric ether were given at short intervals, with temporary improvement of pulse. The vomited matter had the appearance of coffee grounds, the pulse became more and more feeble, and death took place at 4.45 A.M. on 14th August, four days post partum. No post-mortem examination was allowed.

CASE II.—Elizabeth Fisher, æt. 33. Second pregnancy. Last catamenia in November. No miscarriages. Admitted, 17th August 1879. Delivered, 17th August, 4.35 A.M.

*Labour.*—1st stage, 16 hours; 2d stage, 2 hours 35 minutes; 3d stage, 15 minutes. Female child, weighing 8 lbs. ½ oz. Alive.

*Progress.*—After delivery a longitudinal furrow was noticed in the anterior surface of the uterus, as if produced by irregular contraction; it disappeared in the course of the day. She had a rigor after the completion of the third stage.

*17th August.*—Morning, pulse 84; temp. 98°·8.

*19th August.*—Morning, pulse 130, temp. 103°·4. Evening, pulse 132, temp. 102°·9. Complains of severe pelvic pain. Turpentine stupes applied, and at 8.30 P.M. Pil. opii gr. ½ given. The uterus being somewhat enlarged and painful, an injection of ergotin was given.

*20th August.*—Morning, pulse 144, temp. 102°·6. Evening, pulse 132, temp. 101°. Aconite was ordered, but as retching occurred after each dose it was stopped, and bismuth given, which stopped all tendency to vomit. A good deal of diarrhœa has set in. Ordered Quiniæ sulphatis, gr. xxiv., Acid sulph. dil. ʒiv., Aquam ad. ℥vj. M. Sig. ℥ss. quartis horis.

*22d August.*—Morning, pulse 126; temp. 102°·4. Evening, pulse 122; temp. 102°·8. Diarrhœa much better.

*23d August.*—Morning, pulse 120; temp. 102°. Evening, pulse 140; temp. 103°·6.

*24th August.*—Morning, pulse 134; temp. 102°·8. Evening, pulse 136; temp. 103°.

An erythematous patch appeared over the nose and face. Ordered tinct. ferri perchlor. ♏xx. every two hours. At 7.45 P.M. she became very pale and faint, with great dyspnœa. Tongue very dry. Vomiting. Pulse very rapid and feeble. Urine drawn off; was found to be albuminous, and contained fatty tube-casts. Ammonia and chloric ether were given, and ℥ss. of brandy every hour.

*25th August.*—Morning, pulse 144; temp. 101°·2. At 10.30 A.M. there was great dyspnœa. Respiration 64. Pulse very weak and rapid. Tongue dry. Complains of great tenderness over upper part of abdomen on deep pressure, and of pain on drawing her breath and coughing. Ammonia discontinued. Brandy

℥ss. every hour. She gradually became worse, and at 1 P.M. was unconscious. Sulphuric ether was injected subcutaneously with no benefit. Died at 11.30 P.M. Autopsy performed by Dr D. J. Hamilton.

*Report.—Abdomen* contained a couple of ounces of semi-purulent-looking fluid, chiefly in the pelvis, along with some lymph over the broad ligament on the right side. Uterus about half an inch above the brim. There did not seem to be general peritonitis, the effusion being confined to the deeper portion of the abdomen. *Left kidney* pale, anæmic, capsule strips off easily, somewhat firm in texture. *Right kidney* in a similar condition. *Liver* somewhat congested and fatty. *Spleen* anæmic, soft and pulpy. *Heart* — Calibre of aorta small, valves healthy, endocardium of left ventricle a little thickened; a firm clot in the right ventricle, which is also much blood-stained. *Lungs* congested and extremely œdematous. *Uterus*—At the part where the placenta had been attached there was a large fungating slough adherent to the uterine wall. No putrefactive odour. On *microscopical examination* it presented all the appearances of a diphtheritic surface strongly marked.

CASE III.—Mary Manzie, æt. 24. Second pregnancy. Last catamenia end of December. No miscarriages. Admitted 25th August, in labour. Delivered 26th August, at 3.25 A.M.

*Labour.*—1st stage, 20 hours; 2d stage, 9 hours 25 minutes; 3d stage, 11 minutes.

*Position.*—Left occipito-anterior. Male child, weighing 8 lbs. 7 oz.

*Progress.*—Immediately after delivery her pulse was 108.

26*th August.*—Morning, pulse 108; temp. 99°·2. Evening, pulse 150; temp. 102°·4. Is very restless. Pain in lower part of the abdomen. Poultices with opium applied. ℞. Pil. opii, gr. ½. Statim sumend.: ℞. Tinct. aconit., ♏iiss. every two hours.

27*th August.*—Morning, pulse 132; temp. 101°·2. Evening, pulse 158; temp. 101°·6. At 11 A.M., the pelvic pain still being present, the abdomen was blistered from the umbilicus downwards and more poultices applied. Pil. opii gr. ½. The aconite omitted, as it caused sickness. 6.30 P.M.—Quinine, gr. x. every two hours. 9 P.M.—Suppositor. morph. gr. ¼. 10 P.M.—Having had 40 grs. of quinine, it was ordered to be given every three hours only. Pulse very weak and rapid. Ordered ℥ss. brandy every hour. Great tympanites. At 11.30 p.m. an enema containing ℥ij. of tinct. assafœtidæ was given, but with little or no relief of the tympanites. An hour later a large enema (Oij.) containing ℥j. of turpentine was attempted, but when half was given violent vomiting came on and it was ejected; the remaining half was then injected and retained about ten minutes, but with no relief of the tympanites. Ordered as much beef-tea and milk as she can take.

*28th August.*—Morning, pulse 148; temp. 101°·2. Evening, pulse 148; temp. 101°·4. At 4 A.M., being unable to retain the beef-tea and brandy, enemata were given every hour, containing ℥iv. beef-tea, ℥ss. brandy, and tinct. opii ♏xxx. These were retained. 8 A.M.—Turpentine, which she had been taking for the tympanites, appearing to aggravate the vomiting, was discontinued. The vomiting still continues of green bilious-looking material. Ice was given to allay the thirst and relieve the vomiting.

*Evening.*—She vomited greatly during the day, and could retain nothing on her stomach. She retained several enemata of beef-tea and brandy during the early part of the day, but towards evening they were returned. She retained a little brandy administered by the mouth, after a sleep induced by a subcutaneous injection of morphia.

*29th August.*—Morning, pulse 136; temp. 98°. Between 5 and 10 A.M. she took and retained a good deal of milk and brandy. At 10 A.M., being almost pulseless, a subcutaneous injection of ether was given. Fæces and urine now passed involuntarily. 11.15 A.M.—Pulse 136, very weak. Brandy was given in small quantities, but frequent vomiting again took place. An enema of beef-tea and brandy was ejected immediately. Subcutaneous injections ot ether were given at intervals, but only with temporary benefit. Hypodermic injections over the pit of the stomach induced sleep, but had little or no effect on the vomiting. At 1 P.M. she passed into a state of low muttering delirium, gradually got weaker, and died at 9 P.M.

*Autopsy by Dr Hamilton.*—About ℥iij. of purulent fluid were found in the abdominal cavity, with flakes of lymph, more especially in the neighbourhood of the uterus and ovaries. Intestines and stomach were largely distended with gas. On cutting into the uterus the inner surface was found to be occupied by a granular ash-gray coloured deposit, apparently granulating in some parts. Not much putrefactive odour. The os was fissured bilaterally, and the placental site occupied by an ash-gray diphtheritic-looking slough. Other organs healthy.

These three cases present a striking similarity in their symptoms and course. In regard to the onset of the disease in the cases of Mackenzie and Manzie, there was an abnormal rise of pulse and temperature on the day of delivery, and in the case of Fisher on the third day, following the rise in temperature and pulse, tenderness over the abdomen, accompanied by prostration and vomiting. The patient then assumed somewhat of a typhoid condition, with copious watery, offensive stools. The lochia were not suppressed, but from the fœtor of the diarrhœa it was impossible to tell whether they were offensive or not.

One might say, then, that looking at the cases generally, the succession of symptoms was in the following order:—1st, Rise of temperature and pulse; 2d, General discomfort and malaise;

3d, Tenderness over hypogastrium and in both iliac regions; 4th, Prostration and a general typhoid appearance; 5th, Vomiting; 6th, Copious watery stools. As shown in the accompanying charts, there was a want of correspondence between the pulse and temperature—the pulse being high, on some occasions rising to 150 or 160, while the temperature averaged 101°-102° F. This was particularly noticed in the cases of Mackenzie and Manzie. The duration of the disease was 3, 4, and 6 days respectively.

In the case of Eliza Mackenzie no post-mortem examination was permitted. In those of Fisher and Manzie the autopsy revealed a slight peritonitis, with a sloughy and diphtheritic condition of the uterus, especially at the site of the placenta and cervical tear.

Considering first the symptoms generally, secondly, the comparatively high pulse and low temperature, the sudden onset and rapid course, along with the morbid condition found at the post-mortem examination, it is impossible to arrive at any conclusion other than that the patients died from puerperal blood-poisoning. The difficulty, however, which at once meets us is to offer any feasible explanation of the source of the infection; for that the patients were infected subsequent to their admission to the Hospital, and either during or immediately after their labour, seems beyond question, because during this same period over which my present report extends 117 women were delivered at their own homes by the same pupils and nurses, and no irregularity of the puerperium occurred. Further, the patients, more especially Manzie and Macenzie, when admitted were apparently strong, healthy, vigorous girls. It must, however, be borne in mind that there were conditions in these girls, although perhaps not marked to greater extent than many Maternity Hospital cases, which rendered them liable to septic infection. First of all, their nervous systems were depressed, all having been seduced and deserted under peculiarly distressing circumstances, particularly so in Fisher's case. Second, the labours, although not requiring instrumental interference, were all prolonged, more especially in the first stage, Mackenzie being forty-eight hours in labour before the full dilatation of the os. Third, they all presented, in the raw surfaces of perinæum, cervix, and placental sites, convenient channels for septic infection. Two facts, however, must be distinctly borne in mind—first, that the infection was not autogenetic, *i.e.*, that the patients were not infected through any portions of retained placenta or blood-clot; and, second, that ordinary antiseptic precautions were carefully carried out, such as washing the hands in turpentine or carbolic lotion before examining, and making the examination with carbolized vaseline. Further, no students were allowed to come into Hospital who were attending dispensary practice or the dissecting or post-mortem rooms.

That there must have been some septic condition within the

**Eliz. Mackenzie,**
**æt. 23.**

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**Septicæmia.**
**Death.**

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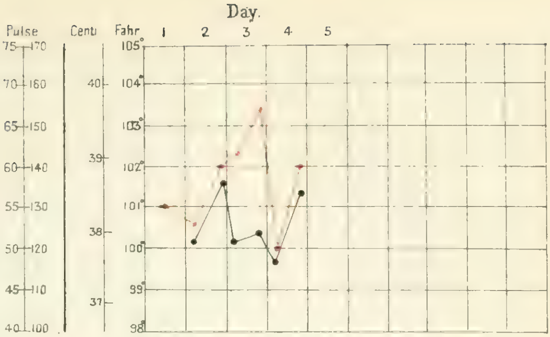
**The Red line shows the state of the Pulse, the Black that of the Temperature.**



**Eliz. Fisher,**
**æt. 23.**

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**Septicæmia.**
**Death.**

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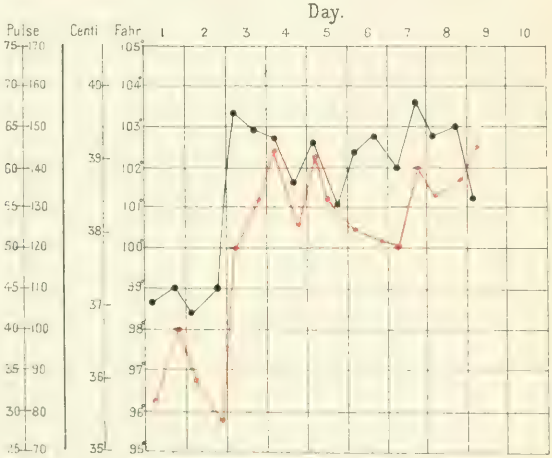
**Red = Pulse.**
**Black = Temperature.**



**Mary Manzie,**
**æt. 24.**

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**Septicæmia.**
**Death.**

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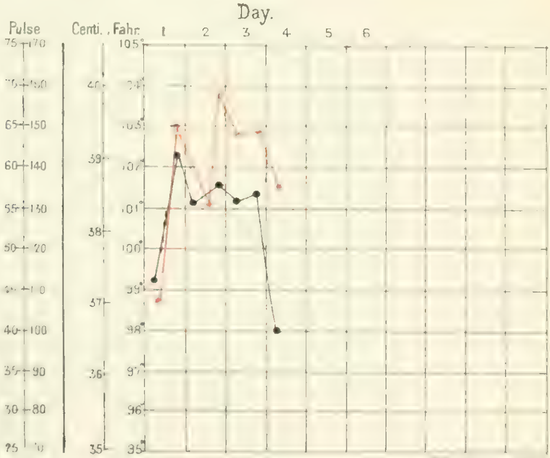
**Red line = Pulse.**
**Black line = Temperature.**



Hospital can hardly be doubted—first, from the fact that one case of septicæmia was recorded during the previous quarter; and, secondly, on account of the large number of peri and parametric complications which occurred during the earlier part of my own service.

In seeking, therefore, for a probable etiology, we are driven to an examination of the building itself. That the sanitary arrangements with regard to drainage, etc., were perfect, we are assured by the most competent sanitary authorities. One defect, however, in the Hospital, which I had already taken occasion to point out to the directors in my monthly report, and which has since been remedied, was the fact that the institution was built and put in active operation without either a mortuary or post-mortem room. The result was that all the autopsies were performed within the main building of the Hospital itself, and not only so, but on the ground floor, in a room below the main ward, from which the currents of air permeated the whole building. Now deaths, and at least one post-mortem examination, took place in Hospital during the warm wet summer weather, and it is not unreasonable to suppose that the septic germs may have had their origin in this way. Failing any other feasible explanation, the theory which I venture to advance is the following, viz., that as a result of the dead bodies remaining in this room until their interment, and of the post-mortem examination conducted there, the hospital became septic. And although septic influences were apparently manifested in the frequent pelvic disturbances which occurred during the early weeks of August, it was only when specially predisposed persons, such as we have shown Mackenzie, Manzie, and Fisher to be, were delivered, that septicæmia was definitely and fatally developed. If further proof were wanting, it would be that since the closure of the Hospital and its complete disinfection, as well as the erection of a detached mortuary, no such cases have occurred.[1]

Before leaving the consideration of this question, it is desirable to make a brief allusion to the indications for treatment, and these I think may be summed in two words, stimulant and nutritive. Quinine and iron were freely administered as well as aconite, but without any apparent benefit. When the septic nature of the disease was recognised, the question arose as to the propriety of washing out the uterus; but as there was no cessation of the lochia, nor any indications of retained matter within the uterine cavity, owing also to the rapidity of the symptoms, as well as the danger attending intrauterine injections, it was decided that the antiseptic vaginal douche was sufficient. This was carried out carefully. The question of intrauterine post-partum injection opens up a wide and interesting subject, which, however, is beyond the scope of my present report.

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[1] Since reading this communication, Professor Simpson has read his report of the quarter succeeding mine, in which no deaths nor serious complications are recorded. This, I think, goes far to prove the correctness of the theory I advance.

From a review of the foregoing cases I am inclined to think, that whenever a well-marked case of septicæmia occurs in a lying-in hospital, the institution should be at once closed, and a thorough investigation and subsequent cleaning instituted. It is to me matter for regret, that on the occurrence of the first case of septicæmia I did not immediately decline to admit any more patients, for it appears almost beyond a doubt that had these three women been delivered at home they would still be alive.

## EXTERN CASES.

There were 117 women delivered. Labours were classified:—Natural labours, 98; preternatural, 2; complex, 4; abortions, 6. Seven cases born before arrival. Of the 98 natural labours, the positions of the vertex were,—Left occipito-anterior, 78; right occipito-posterior, 10; right occipito-anterior, 3; left occipito-posterior, 0; position was unascertained in 7.

*Preternatural.*—Two breech cases: Left sacro-anterior, 1; right sacro-posterior, 1.

*Complex labours.*—Twins, 3; placenta prævia, 1. Forceps were applied in two cases—1 uterine inertia; 1 placenta prævia.

*Mortality.*—Maternal, 2: 1 antepartum hæmorrhage; 1 post-partum hæmorrhage. Fœtal, 7. Infantile, 1.

As a full report of the case of antepartum hæmorrhage has already been published by my resident, Dr Machattie, in the *Medical Times and Gazette*, I need not refer to it in detail.

The placenta prævia case I hope to make the subject of a special communication. In drawing this report to a conclusion, I have to add that a patient whose perineum had been torn to the verge of the anus, and which, although repaired at the time of rupture, refused to heal owing to her syphilitic condition, was readmitted. Two days after admission she developed symptoms of fever, and was sent to the Royal Infirmary. The case turned out to be one of typhus. A few days before my term of office expired, two of the nurses, who had been much overwrought, also developed fever, and were accordingly sent to the Royal Infirmary, where I regret to say they have both succumbed to typhus fever.

I cannot conclude this report without expressing my high appreciation of the services of the resident physicians, Drs Hurst and Machattie, during a somewhat trying quarter.

ARTICLE IX.—*Case of Pleuro-Pneumonia, following a Fall in which the Chest was struck over the Site of a Pseudo-osseous Formation in the Pleura: Thrombosis: Sudden Death: A Clinical, Pathological, and Medico-legal Study.* By Sir JOHN ROSE CORMACK, M.D. Edin.; M.D. Paris; Fellow of the Royal College of Physicians of London; Member of the Société Clinique of Paris; Physician to the Hertford British Hospital of Paris; Chevalier de la Légion d'Honneur.

(*Continued from page* 612.)

TWO apparently different and yet essentially similar pathological phenomena — pseudo-osseous formation and thrombosis — were observed in the case of Joseph S. Both originated in a similar morbid change, viz., blood-stasis. The pseudo-osseous formation was old in its origin, and, probably, slow in its growth. Its commencement was the formation of a fibrinous clot in enlarged veins embedded in false-membrane. Fibrinous deposits and fibromata, small and large, are prone to calcify. Of all adventitious products they have the greatest tendency to undergo this change. This is seen in phlebolites, which begin as small fibrinous deposits in varicose veins, and in other veins in which the blood-current is sluggish: they then become converted into round bodies of stony hardness, chiefly composed of phosphate of lime. The pseudo-osseous body in the case of Joseph S. had, no doubt, an exactly similar history, its peculiarity of shape being explained by the fact that the body was the calcification of a fibrinous deposit which was originally deposited from the blood within a vein or veins. Thrombosis, such as that found in the pulmonary artery of Joseph S., necessarily causes death; but when patients survive thrombosis for a long time, as often happens when it is moderate in extent and favourably situated, it becomes or may become calcified. To sum up the proposition—*Joseph Sparrow's pseudo-osseous formation was a calcified thrombosis.*

That Joseph Sparrow's urine was albuminous is a noteworthy, though not a very important fact; for Gubler has shown that the urine secreted in the death-agony is always albuminous. This, no doubt, depends upon the blood-stasis in the pulmonary and renal vessels which then exists. The thrombosis which had long been forming in Joseph Sparrow's pulmonary veins was no doubt more or less the cause of his urine being albuminous during life; and the same cause, of course, explains why the urine found in the bladder at the autopsy was intensely albuminous.

Albuminous expectoration, which Pinault, in 1863, pointed out as a not uncommon sequel of thoracentesis, has been attributed by Dr George Johnson to blood-stasis in the pulmonary vessels. Unfortunately, the expectoration of Joseph Sparrow was not chemically tested. Probably it was albuminous.

The frequency of the formation of coagula in the pulmonary artery in cases of pleuritic effusion, and in relation to the operation of thoracentesis, has for some years past attracted much attention, particularly in France. The subject, in some of its most interesting and important relations, has been well and briefly set forth by Dr J. R. Wardell in the course of an excellent series of papers on pleuritic effusion which he published, in 1874, in the *British Medical Journal.* The following is the passage to which I refer:—

"In 1863 M. Pinault first pointed out the singular fact that not unfrequently *albuminous expectoration* quickly follows thoracentesis. MM. d'Espine, Woillez, Marrote, Béhier, and Terrillon have lately called attention to this question. The symptom, it is stated, may come on from ten minutes to an hour after the operation, and continue for several hours or an entire day. There is said to be a correlation between the quantity expectorated and the mildness or gravity of the symptoms. In mild cases the secretion is but in limited degree, but very abundant in the severe examples. The disturbance which it causes may be merely slight dyspnœa, or there may be distressing and acute dyspnœa, spasmodic cough, and fine subcrepitant *râles;* and in fatal cases the dyspnœa has been most urgent, the cough continuous and suffocating when asphyxia has supervened, and the accumulation of liquids has filled up the respiratory system. This albuminous product, it has been related, is yellowish, coagulates with nitric acid, while the expectoration is mere bronchorrhœa, and the microscope detects epithelial cells, pus-corpuscles, and blood-corpuscles. The point of disputation is, How and in what manner is this albuminous fluid produced? Perforation by the trocar, spontaneous perforation, reabsorption after the operation, and pulmonary congestion giving rise to transudation through the alveolar walls, have all been assigned as causes. In short, without citing arguments to rebut the first three theories, it may here be observed that the last-named mode is held to be the most explanatory of the phenomena. Œdema is the consequence of pulmonary congestion. When that condition has for a time continued, serous transudation then eventuates, in addition to bronchial mucus: when the lung has been for a long time compressed, and the liquid which has surrounded it and pressed upon it is suddenly removed, the atmospheric air, by rushing into the vesicles, irritates the mucous membrane and causes vascular excitement, and hence the sequents. Such is the explanation of certain of the disputants; and it would seem that such explanation is not wholly unfounded on physiological and pathological principles. Those who take this view maintain that the analogue is to be noticed in albuminous nephritis, when the Malpighian capillary congestion becomes relieved by a serous transudation into the tubules. Dr George Johnson, who last year referred to the subject in a clinical lecture, thinks another etiological explanation may be given of albuminous expectoration. He attributes the phenomenon to absolute blood-stasis in the minute pulmonary vessels, especially in the pulmonary veins. I have before pointed out that coagula in the large pulmonary veins is a condition which takes place in a lung compressed by pleuritic effusion more frequently than was formerly supposed. It is evident, from the examples given and the reasoning put forth by the French pathologists, that the irritant properties of the sudden ingress of atmospheric air is the most explicable cause of the congested capillaries and the sequential event of the transudation of serosity." —[*Brit. Med. Journal* for Dec. 12th, 1874, p. 737.]

The dominant etiological idea in the passage now quoted is that albuminous expectoration is a common sequent of thoracentesis. That so it often happens is unquestionable; but it is also true that albuminous expectoration is met with when no paracentesis has been performed. Thoracentesis is a frequent cause of albuminous expectoration, simply because that operation is a frequent cause of a sudden increase of blood-stasis in the pulmonary vessels. A similar blood-stasis often exists in a high degree in pleurisy before as well as after thoracentesis. In a case in which thoracentesis was performed, I found the sputa albuminous on *the day before* the operation.

### III.—*Nature of the Pseudo-osseous Body found in the Pleura; the Conditions under which similar Adventitious Products are formed in the Pleuræ and other Situations; the Consequences which they produce; and the Errors in Diagnosis to which their presence may lead.*

The term "osteophyte" is generally applied to pseudo-osseous formations similar to that which I now submit to the Society. Nevertheless the term is inappropriate, the bodies in question having very little in common with the osteitic formations which proceed from the periosteum, and which originate under its special formative agency. It is therefore better, with a view of avoiding an inaccurate nomenclature, to use the term "pseudo-osseous formation" when we are speaking of bodies which, like that now under consideration, has nothing in common with the character of bone excepting hardness and sometimes a general resemblance in shape.

The specimen before the Society was kindly examined for me by Dr Cleland of Glasgow. His report on it is to the following effect:—"The specimen sent to me proves on examination to be a deposit infiltrated with calcareous matter occurring in connective tissue, or, more briefly, it may be called *calcified connective tissue.* Such deposits are not uncommon. They are well known as occurring in the pleura and in the fibrous capsule of the spleen. They are likewise found in the form of a shell surrounding certain ovarian cysts filled with solid matter; in the form of nodules in fibrous polypi of the uterus; and in other sites."

Specimens of calcification of false membrane situated within the pleural cavity may be seen in the principal British and foreign museums.

The Museum of the College of Surgeons of England contains several such specimens. It is noteworthy that the older part of the catalogue, in describing calcifications found in the pleura, pericardium, and elsewhere, uses the terms "bone," "bony," and "ossified;" and that the newer parts—the supplements—employ the terms "calcification" and "calcified." The specimens of calcified false-membrane situated within the pleura are thus described in the catalogue:—"No. 1754. Part of the base of a lung firmly adherent to the diaphragm. Part of the false-membrane by which they are united is converted into a thin smooth layer of hard bony substance. Presented by Joseph Swan, Esq."—"No. 1754*a*. A portion of calcified false-membrane which lined the right pleural cavity. It is nearly a quarter of an inch in thickness, shows some indications of lamination, and is rough and granulated on both surfaces. Under the microscope it does not exhibit any true osseous structure. From a seaman, 40 years of age, who is said to have died of 'bronchitis of long standing.' The right lung was firmly adherent to the parietes of the chest. The calcified connecting material was thickest at the posterior part, and became gradually thinner as it approached the cartilages of the ribs."—"No. 1755. Part of five ribs closely approximated, and having a thick plate of bone, coarsely granulated on its surface, attached to their interior. The bone was probably formed in the substance of false-membrane, between the layers of the pleura, by the contraction of which it is also probable that the ribs were approximated."—"No. 1755*a*. Calcified false-membrane, which completely lined the left pleural cavity. [Dr J. Thurnam, 1871.]"—"No. 1755*b*. Specimens of three different varieties of calcified pleura. [Dr J. Thurnam.]"

The Museum of the College of Surgeons of Edinburgh also contains specimens of the same class. The following are the descriptions given in the catalogue:—"No. 1357, xxviii. A. A large portion of the pleura pulmonalis of an asthmatic patient, changed into a substance resembling bone and cartilage. Some of the air-cells towards the surface of the lung are considerably enlarged. It resembles the lungs of the broken-winded." This is a wet preparation; the thickening looks like fibrous tissue, and is in size about 2 inches by 1 and 0½.—"No. 1358, xxviii. A. Osseous deposition between the pleura pulmonalis and pleura costalis. The preparation shows both membranes distinctly. Presented by Dr Hunter." This is a large calcified plate of calcareous matter, about 3½ inches by 2½, and one-eighth of an inch in thickness.—"No. 1359, xxviii. A. Ossification of the pleura of great thickness." This preparation shows a thickness of calcareous matter of irregular shape about 4 inches long, and an inch thick at the thickest part; it is situated close to, and parallel with the rib; but is not attached to it. The similarity in form and situation to the pseudo-osteophyte found at the autopsy of my patient Joseph Sparrow is remarkable.—"No. 1360, xxviii. A. Deposition of osseous matter in the situation of the pleura costalis." Large irregular masses of calcareous matter are seen to be attached to, and projecting from the rib. This preparation bears a general resemblance to No. 1359, just described; but the calcareous deposit is larger and is attached to the rib.

The Anatomical Museum of the University of Edinburgh contains a very remarkable preparation from the collection of the late Professor John Hughes Bennett, in which is seen a large irregularly shaped calcareous mass in connexion with the pleura costalis, and attached to the fourth, fifth, sixth, seventh, and eighth ribs. This mass is about 6½ inches long, and, at the centre, is nearly 2 inches in thickness.

The following passage from Morgagni shows that pleuritic pseudo-osseous formations had a place in museums about a hundred and fifty years ago:—

"But as to what relates to the pleura being found bony after death, the circumstance is certainly of too rare a nature to be attributed merely to old age. I have dissected many older men than this, and among these one who was spoken of above, about twelve years older than this man was; and yet I never lit on a like appearance. It is true that in the year 1741, in an old man, of a moderate habit of body, who died of a diarrhœa, and whose body I made use of for the demonstration of many things in the natural way to my pupils, when it was hardly possible to pull away one lobe of the lungs from the back without laceration, we observed that betwixt the ribs and the lungs a bony lamina was interposed, part of which I still preserve. This lamina adhered to some of the ribs, and to the spaces that lay betwixt them, near to the vertebræ, yet in such a manner that it could be easily drawn away; and this vicinity you will also observe in the following history. But that besides that I doubted whether this lamina belonged so much to the pleura as to the membrane of the lungs, it was not much more than an inch in width and ten fingers'-breadth in length; nor did anything of that kind occur in any other place but in this. However, the most excellent Haller has sometimes seen a 'callosity' of the pleura, but especially in a thief who was publicly hanged, so that 'it took up a large space, equal to the extent of a man's hand.' The same appearance was likewise in this man where the pleura touched 'the ribs behind;' yet in that part neither 'was it a bone, but a callus.' And the celebrated Hottinger found 'the lungs grown to the left side, and the pleura invested with a kind of matter not unlike to a cartilage;' and this he judged to arise from a pleurisy under which the woman had laboured some years before. Perhaps also this thief, and the old man I have spoken of, had that membrane made callous and bony from an inflammation which had formerly preceded."—[Letter xxi., article 22.][1]

The most extensive calcification within the pleura which I have found recorded was exhibited and described by M. Paulier in 1873 to the *Société Anatomique de Paris.* (*Bulletin de la Soc. Anat. de Paris, Année* 48*me*, 1873, p. 875.) M. Paulier exhibited to the Society the thorax of a man who had died of pneumonia. Three years previously the patient had had purulent pleurisy, for which M. Verneuil treated him by introducing a drainage-tube into the chest. The patient supported a continuous drain through the tube for two years; and at last the pleural cyst had by degrees become so much reduced as to yield only an insignificant amount of secretion. There was great deformity of the walls of the chest; the ribs were abruptly bent at their posterior angle, and thereby the lateral wall of the thorax was so much depressed as to form almost a hollow. Irrespective of the change of shape in the chest now described, some of the ribs were brought into close proximity, and the fourth and fifth ribs were soldered together by an osseous substance (*une soudure osseuse*). The most curious appearance was that presented around the drainage-tube. It was surrounded by a mass of osseous callus (*cal osseux*), which traversed it, forming a conical canal two centimètres in length, which looked as if it had been cut out of the compact bone by a scoop (*creusé comme à l'emporte-pièce à travers la substance compacte de l'os*). The pleura was exceedingly thickened, and converted into a resisting fibrous shell of nearly three centimeters in thickness. At some points it was a little vascular; and its inner surface was smooth, resembling a pyogenetic membrane.

Dr Vergely published, in 1873, a case in the *Bordeaux Médical* which presents several points of resemblance to that which forms the subject of the present communication. There existed a fibro-cartilaginous state of the pleura, cardiac thrombosis, and thrombosis of the pulmonary artery. During life the patient had symptoms of broncho-pneumonia, with bronchial dilatation. He died in a state of almost complete asphyxia ten weeks after his admission to the hospital. At the autopsy there was found a great diminution of the volume of the right lung, which was lodged in a very limited space, and was strongly adherent to the thoracic walls. The right pleura was five or six millimeters in thickness, and had a fibro-cartilaginous appearance and consistence. The right lung was in a state of atalectesis, traversed by white cords and tortuous veins distended by blood. When these tortuous veins were opened they were found to be filled by small soft black clots. All the branches of the pulmonary arteries and veins were distended; the superior vena cava, the inferior vena cava, and the right auricle were very large. The right auricle and ventricle were filled by a grayish-blue coagulum, which adhered to the walls of the heart and was prolonged into the pulmonary artery.

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[1] MORGAGNI (JOHN BAPTIST).—*Seats and Causes of Diseases Investigated by Anatomy, in Five Books, containing a great variety of Dissections, with Remarks:* Translated from the Latin by Benjamin Alexander, M.D., in three volumes. London: 1769.

Dr Vergely believes that in this case death was caused by the sanguineous coagulations in the heart, which from their appearance he was convinced had been formed anterior to the death-agony. He considers that the chronic pleurisy had determined dilatation of the right auricle and of the vessels of the lungs, as a consequence of difficult pulmonary circulation. There likewise existed in this case numerous conditions favourable to the coagulation of the blood, viz., the particular condition of the blood, the inopexia (the patient was very anæmic), dilatation of the heart caused by the difficulty of the pulmonary circulation, the fatty state of the heart, the impaired power of the auricular contractions, and a slowness of the circulation. In the cases of pleurisy in which there is copious effusion, it has been said that death may take place from syncope. Without disputing this mechanical explanation of the cause of death, Dr V. is more disposed to attribute death to cardiac coagula and embolia in the pulmonary capillaries. Sometimes when a late thoracentesis is performed after the employment of a lowering treatment, the circulation all at once becomes increased in activity, and so detaches coagula which had been formed for some time previously as the result of embarrassed circulation. Death may thus occur suddenly from obliteration of the pulmonary vessels.

*Errors in diagnosis* may be caused by the presence of pseudo-osseous formations and calcareous deposits in the pleuræ.

In the case of Joseph S. the symptoms immediately consequent to the fall had suggested that possibly one or more ribs had been fractured, though no recognisable signs existed of that having occurred.

In falls, blows, and penetrating wounds of the chest pre-existing calcareous concretions in the pleura may give rise to an error in diagnosis. The calcareous concretions may originate diagnostic difficulties in auscultation and percussion; and in manipulation may be mistaken for fragments of a fractured rib.

In the *Bulletin de la Société Anatomique de Paris* (48*me Année* 1873, p. 749), S. Pozzi describes a case of penetrating wound of the chest inflicted by the discharge of a revolver with suicidal intention. The case presents many points of interest in connexion with that now under consideration. The ball wounded the lung: there was neither pneumothorax, emphysema, nor hemoptysis. Death took place long after receipt of the wound, and was the result of suppurative pericarditis. At the autopsy there were found in the pleura pseudo-osseous formations simulating fractures of the ribs.

The following is the history of the case:—

"On the evening of 21st September 1873, Leclerc Julien, aged

23, a man of nervous temperament and of fairly good constitution, was brought to the Hôpital de la Charité of Paris. He had discharged a revolver into his chest, in the region of the heart, in the fourth intercostal space, a little to the inside of the nipple, two finger-breadths from the left edge of the sternum. The ball, after traversing the thorax in an upward and slightly inward direction, lodged in the skin, a finger's-breadth from the spinous process of the eighth dorsal vertebra. Next day it was extracted by making a small incision, which soon cicatrized. The entrance of the ball occasioned neither dyspnœa, hemoptysis, pneumothorax, nor emphysema. For some days the state of the wounded man was relatively good, but with a view to prevent recovery he undid the bandages, and on several successive mornings exposed himself to the cold by walking in the garden. After these proceedings he began to cough and to experience increasing dyspnœa. The anterior wound—that formed by the entrance of the ball—suppurated profusely, and at the same time there was discovered, on auscultation, a pericardiac friction-sound, which continued for two days and was accompanied by fever. On 1st October the patient was transferred to Professor Gosselin's wards, then temporarily in charge of M. Perrier. Observing that there was a certain relaxation of the soft parts at the orifice by which the ball had entered, and that there were symptoms of an accumulation of pus, M. Perrier introduced a loop of drainage-tube into the thoracic cavity, by which cleansing washes were injected morning and evening. At this period it was discovered by the introduction of the finger into the wound, that there was a cavity shaped like a shirt-button (*en forme de bouton de chemise*), the retracted part of which corresponded to the intercostal space; the anterior portion was formed by the detachment of the skin from the pectoralis major muscle, and the posterior portion extended backwards to the thoracic wall, immediately in front of the heart, which was felt beating under the finger. The dyspnœa continued, accompanied by precordial pain. On auscultation of the heart and lungs, nothing particular was noticed except an abnormal interval between the sounds of the heart, and a diminution of the vesicular murmur.

"When M. Gosselin resumed charge of his wards about the middle of October, he enlarged the orifice by which the ball had entered. By this proceeding, the cleansing of the hollow was rendered more easy, and the patient's discomfort was diminished. *On introducing the finger into the enlarged opening, bodies were felt which were supposed to be splinters of the ribs.* Some little bits of *debris* were removed by the forceps. From the middle of October to the middle of November the state of the patient seemed to be improving. He was out of bed during the day, and the dyspnœa had almost ceased. The pulse was still small. The patient was visibly becoming exhausted by the profuse suppuration of the wound; the cough was persistent; each time the injection was performed the fluid was expelled at the orifice.

"At the beginning of November some œdema appeared in the lower extremities, accompanied by slight ascites. At repeated examinations of the urine by heat and nitric acid no albumen was detected. Nitric acid produced a copious precipitate of uric acid, which was not dissolved on the application of heat.

"About the middle of November the patient complained of a return of the dyspnœa, which, after the first few days, he had surmounted. The pulse was small, thready, and irregular. On cardiac auscultation no abnormal sound could be heard; but the physiological sounds of the heart were observed to be feeble. This condition continued. Although an extension of the former incision was made, it only caused the evacuation of an insignificant quantity of purulent fluid. On the morning of the 17th November the patient was pulseless; and he died in the evening of that day, after a short struggle.

"AUTOPSY—THORACIC CAVITY.—Both *lungs,* throughout the entire extent of surface, were adherent to the parietes of the chest; they both contained some tubercular deposit at their apices, and there was a cavity in the left apex. The lungs adhered to the diaphragm and pericardium and to the thoracic walls, so that the contents of the chest formed, as it were, one mass, which was removed with difficulty. Around the wound, to the extent of about eight centimeters square, the pleura was macerated and blackish in colour. The whole of the anterior surface of the left lung was covered with false-membrane, which was thick and resistant. In this situation, and all round the orifice, the anterior surface of the thoracic pleura presented numerous *ossiform concretions,* which were found as high as the second rib. They were *the same bodies which, during life, had been taken for splinters of bone.* There was no fracture of the ribs. The small calcareous plates in question were furrowed and uneven. Generally, they were from three to four millimeters in thickness, and some of them were as much as two centimeters square. When examined under the microscope, no osteoplasts were discovered. The concretions were chiefly formed of carbonate of lime. The left lung presented a perforation close to its anterior margin. The traject of the ball was lined with a white false-membrane, which looked like serous membrane, was very thin, and was in immediate contact with the healthy pulmonary tissue. It could be followed to the posterior part of the lung, where all trace of the course of the ball was lost.

"The heart, imprisoned by pleural and mediastinal false-membrane, was found not to have been wounded by the ball, which had passed close to its left border. The pericardium, throughout its whole anterior surface and on its left side, was adherent to the heart. In this situation it formed the basis of the course of the ball, which had grazed and perhaps contused the base of the left ventricle. To the right of its posterior surface the pericardium presented a greenish colour, and formed the wall of a vast pouch containing pus, which covered the whole of the right ventricle and the posterior part of the left ventricle. This abscess contained nearly a large tumbler of greenish pus. The pericarditis, the existence of which was ascertained during life, was therefore adhesive in the immediate vicinity of the traject of the ball and on a level with the anterior aspect of the heart. It was suppurative in the remainder of its course. The thickness of the areolar false-membrane which covered the suppurating pericardium proved that the abscess was of old standing; on the other hand, at the points at which the pericardium adhered to the heart, the adhesions were immediate—that is to say, without the intervention of any plastic product.

"There was no communication between the traject of the ball and the abscess of the pericardium, which were only separated by a thin partition. The muscular tissue was flaccid, and its colour was that of a withered leaf. The right ventricle contained a perfectly white and flattened clot adherent to the columnæ carneæ, and which, bifurcating, extended into the pulmonary artery. At the infundibulum it compressed the sigmoid valves. It was only beyond its bifurcation that it was cruroric. The left ventricle contained a similar fibrous clot, extending through the whole arch of the aorta, the thoracic aorta, and the abdominal aorta. Both femoral arteries contained cruroric clots. The aortic fibrinous clot was cylindrical, and a little larger than a goose's quill. At the origin of the brachio-cephalic artery the clot presented a flattened bulging, to which were attached three small, very thin prolongations, folded on themselves like threads of vermicelli. One of these prolongations evidently extended into the brachio-cephalic trunk; but the other two, which no doubt corresponded with the left subclavian and left carotid arteries, were folded on themselves. The clot so formed bore a great resemblance to clots formed in the trunk and branches of a vein—the saphena vein, for example—at its point of emergence. Had it been found in the pulmonary artery, in place of in the aorta, it might easily have been mistaken for an embolic clot. This possible cause of mistake deserves mention.

"ABDOMEN.—Considerable ascites existed. The *kidneys* were in a normal condition. A hydatic cyst was found on the convex surface of the liver. It was of the size of a filbert-nut, and of a blackish colour."

In conclusion, let me add, that the interest of the case of Joseph Sparrow chiefly consists in the manner of the sudden death, and in the fall on the situation of the pseudo-osseous formation having aggravated a pre-existing pleurisy, and presented likewise symptoms of fracture of the ribs. Its clinical value is enhanced by the completeness with which all the facts came under the reporter's personal observation.

# Part Second.

## REVIEWS.

*The Principles and Practice of Gynæcology.* By THOMAS ADDIS EMMET, M.D., Surgeon to the Woman's Hospital, New York, etc. London: J. & A. Churchill: 1879.

*Lectures on the Diseases of Women.* By CHARLES WEST, M.D., etc. Fourth edition, revised and partly rewritten by the Author, with numerous Additions by J. MATTHEWS DUNCAN, M.D., etc. London: J. & A. Churchill: 1879.

*Clinical Lectures on the Diseases of Women.* By J. MATTHEWS DUNCAN, M.D., etc. London: J. & A. Churchill: 1879.

NOTHING could more unmistakably demonstrate the great degree of interest taken in gynæcology all over the civilized world than the immense amount of literature devoted to the exposition of its various questions that is constantly pouring forth from the Continental, the American, and the home press. The volumes whose titles head this notice are evidence of the truth of what we assert regarding the copiousness of the literature of this subject.

Dr Emmet's work consists of 860 closely printed large size octavo pages, and certainly contains a very large amount of valuable and frequently original material. In his preface the author claims for his work that "it is essentially a clinical digest, that it includes the results of his individual experience, and aims to represent the actual state of gynæcological science and art." This double object of giving to the world the author's experience and individual views, whilst at the same time representing the present state of gynæcological science and art, has, we think, proved to some extent a misfortune to the character and usefulness of the work. The author has attempted too much, and has consequently, in our opinion, failed to accomplish his entire aim. The statistical tables of Dr Emmet's experience, and the numerous clinical cases given throughout the work, are admirable, and their value can hardly be overestimated. But we have some difficulty in appreciating the numerous long and frequently tiresome expositions of theoretical principles that appear in the earlier part of the book especially. They are apt to wear out the reader's patience without compensating him adequately for the toil of wading through them. Chapter VI., on the Principles of General Treatment, ought, however, to be excepted from this stricture, for it contains many observations and directions replete with sound sense and sagacity.

His observations, in this chapter, on the use of sunlight in anæmia, on the danger of encouraging invalidism, and on personal influence in the management of patients, are to our mind exceedingly valuable.

Dysmenorrhœa engages considerable attention, but we cannot see that Dr Emmet introduces any fresh light into this obscure region. In the face of what appears to us overwhelming evidence to the contrary, Dr Emmet commits himself to Dr John Williams's theory of the complete removal of the entire mucous membrane of the body of the uterus at each normal menstruation. As one would naturally expect, this theory, having been once adopted, is applied to explain the origin of dysmenorrhœa membranosa.

A tendency to magnify unduly the author's personal views, which is manifest throughout the volume, is seen in the author's persisting throughout the whole work in ignoring the distinction accepted by the profession generally between perimetritis and parametritis, which he lumps together under the barbarous term of "cellulitis." The same unfortunate tendency is seen in the author's multitudinous recommendations of hot-water injections in the treatment of pelvic disease, as also in the far-reaching effects which he ascribes to tear of the cervix. This accident, according to him, is not only the cause of hæmorrhage, of abortion, etc., but is credited with being the chief source also of carcinoma of the cervix. In the same objectionable direction, also, may be cited the extreme prominence given in the work to slight modifications of instruments and of operative methods which have been made by the author. An almost ludicrous example of the latter defect may be found in the author's observations upon his mode of reducing chronic inversion of the uterus, Chapter XXI. But many similar cases are to be found throughout the volume.

These very objectionable features of placing the author's peculiar views and personal claims in such bold relief in a systematic work which claims to represent the present state of the science and art of gynæcology would have seemed less out of place in a clinical treatise upon gynæcological surgery. Accordingly, we think the too ambitious aim of the author, not only to represent the results of his own great experience as a gynæcological surgeon, but to represent the present position of the science and art, is in a great measure to blame for these defects. If Dr Emmet had contented himself with writing a work on clinical gynæcological surgery, his success would have been much greater. And, after all, in spite of its somewhat far-ranging aims, the work is mainly one on clinical surgery applied to the diseases of women.

But we have pleasure in leaving this disagreeable aspect of the book to notice that the author's opinion and practice indicate the advent of what we regard as vastly improved opinions in American gynæcology, and manifest a decided recoil from the destructive mechanical methods of treatment introduced into practice on that continent chiefly through the combined influence of the late Sir James Y. Simpson and Dr Marion Sims. Dr Emmet's remarks upon the necessity of care in adapting every vaginal pessary, and of seeing that it actually keeps the uterus in proper position, neither unduly elevating it nor permitting it to descend too low into the pelvis, are particularly valuable. As one would expect, an undue importance is still attached to all degrees of uterine flexion, but the following statements we rejoice to find in regard to their treatment at pp. 351 and 352 :—

Speaking of the treatment of flexion of the uterus, Dr Emmet says, "Much mischief has resulted during the past eighteen years from the want of accurate knowledge as to the true pathology of these cases. Should the views which are now presented prove, on further investigation, incorrect, the error, at least as taught, will produce little harm. Since the practice of indiscriminate division of the cervix was first introduced by Professor Simpson, more malpractice has been perpetrated throughout the world in the name of this simple operation than from any other procedure known to the profession. The intrauterine stem and the practice of dilatation for the treatment of flexions might, with our present views of the pathology, be dismissed without further comment. But, unfortunately, members of the profession are frequently advocating the use of the stem pessary, regardless of the experience of those who have gone before them, until they, in turn, have to learn that they have not been wiser in their day. As soon as the true condition comes to be appreciated, the use of the intrauterine stem will be abandoned as a most irrational instrument. Experience will at least teach every one that no permanent benefit is ever derived from its use, that no degree of tolerance is ever established, but that sooner or later, in almost every case, mischief will result. I have long taught that its use in a flexion would be as irrational as the introduction of a *straight steel sound* into the *urethra* for the relief of an existing *chordee*; the penis might be straightened by force, but the cause of difficulty would certainly not be removed. Were we to straighten out a flexion of the cervix by means of an intrauterine stem, the end of the instrument would make continued pressure upon the posterior wall of the vagina, on account of the want of necessary space in the canal. So much disturbance would be excited, in an American woman, at least, in the vagina and uterus, that inflammation would certainly become established if its use were persevered in. . . If this instrument be employed with a flexion of the uterine body, the disturbance is likely to be even more marked. A condition here exists which so closely resembles an inflammatory one that the slightest provocation is often sufficient to establish cellulitis, and even general peritonitis. . . . The same objections are to be advanced against the practice of dilating with either steel sound or the sponge-tent, so far as they may be employed for the relief of a flexion of the uterine body. It may be accepted as a truism derived from experience, that in flexion of the uterine body no surgical procedure will be of the slightest use towards permanently removing the conditions, and that whenever practised in the usual conditions the life of the patient is thereby placed in jeopardy. The only exception is when a flexion of the body forward has so long existed that, from absorption of tissue at the angle, the condition has become a permanent deformity." This is surely wounding the mechanical school in the house of its friends, and proves a very great advance indeed. Our only regret is that Dr Emmet should recommend an extremely hazardous, and on the face of it useless, operation to meet his assumed conditions in long-continued flexion. Dr Emmet says it has frequently failed in his experience, and we certainly think that only failure could be anticipated from such a violent and purposeless proceeding as is sketched at page 263, indicating as it does division of the entire posterior lip of the cervix, deep incision of the tissues of the organ at the lower part of the posterior wall of the uterus, and lengthened section of the anterior wall higher up. Our difficulty is in understanding how any reasonable member of our profession could expect relief from such a proceeding. It seems to us only possible to give relief as a mode of scarification, and surely other less dangerous methods of scarification ought always to be preferred. The idea that it could relieve stricture if such were present is, we think, palpably absurd. In flexion of the cervix below the vaginal junction Dr Emmet recommends incision of the posterior lip in anteflexions, and of the anterior lip in retroflexions. But we hope he will by-and-by come to be truer to his principles, and will recommend to let them alone. Since rupture of the cervix is with him so formidable a lesion, we wonder he reconciles himself so readily to free incision of the vaginal portion of the cervix as he does. His faith in transverse compression of the vagina as a means of preventing the occurrence of ectropium and erosions of the cervix in the case of ruptures and incisions in the mesial line seems to us far from established on a secure foundation.

The author's special views on the effects and treatment of cervical tears and their consequences are well known. They naturally obtain a very large share of attention in the work. As the operation is on its trial at present, we feel scarcely warranted to express an opinion upon the question. So far as our experience goes, it is in the direction of supporting the operation as advantageous in many cases of transverse tear of the vagina with erosion, hæmorrhage, tendency to abortion, etc. How far the erosion is dependent upon the cicatrix, and also what proportion of such cases are to be treated by operation and what may be expected to yield to less formidable measures, must be held as yet as undecided.

Special prominence is given by Dr Emmet to the surgical treatment of fibroid tumours, but the advantages of ergot are faithfully indicated. The chapters on vesico-vaginal fistula are extremely valuable, and are enriched with short notes of no fewer than 202 cases.

In connexion with cystitis, Dr Emmet insists strongly upon the advantage of making an artificial vesico-vaginal fistula as a means of resting the irritated mucous membrane, and thinks in bad cases this operation should not be too long postponed.

We are glad to notice that Dr Emmet sets his face firmly against the frequent performance of Battey's spaying operation, and insists that we need much more information yet regarding its proposed beneficial effect even in cases deemed suitable for it. Dr Emmet would restrict its application to cases of threatened insanity, epilepsy, or phthisis, and says that for nervous disturbances which present more of the hysterical element the operation should never be thought of.

In the course of six chapters devoted to the subject, tumours of the ovary are very fully treated. The pathology of this subject is very fairly represented, including an account of the recently published views of Foulis and Thornton respecting the value of microscopic examination of the cyst fluid and of ascitic fluid as a means of determining the malignancy or innocence of an ovarian cyst. The directions to guide the diagnosis strike us, however, as being extremely meagre and imperfect. The various details in the operation of ovariotomy are, on the contrary, given with great minuteness.

In spite of a distinct tendency towards the *nimia diligentia chirurgiæ*, the work, taken as a whole, is an important contribution to clinical gynæcological surgery, and will well repay the careful study of the gynæcologist, although most readers will consider it to be rather too wordy. But as a systematic treatise, embracing the present position of the science and art of gynæcology, Dr Emmet's work must, we think, be regarded as coming very far short indeed of accomplishing the object of its author. The work is, indeed, so purely surgical that if it correctly represented the present state of gynæcological science and art the term gynæcological physician would be an entire misnomer.

Dr West's work tends rather to run in the opposite direction to that of Dr Emmet. Whilst Emmet would reduce the whole of gynæcology to a department of surgery, Dr West in as far as possible eschews surgical interference with the genital organs of the woman, and endeavours to guide the treatment of the gynæcologist by the light derived from pure medicine. In this he runs counter to the prevailing tendency of the time. "Surgical greed," to use a somewhat quaint but peculiarly expressive term employed occasionally by Dr West's co-editor, is at the present far too powerful a principle in the domain of gynæcology. Still there is abundant evidence of a tendency towards recoil from this extreme, and the fact that Dr West's work should be in demand is one of them. A new feature is introduced into the present edition in the shape of contributions from the pen of Dr J. Matthews Duncan interspersed throughout the book, and distinguished from the author's work by being contained within brackets. These are numerous, but brief. Among them may be mentioned observations on the use of the uterine sound, the evil results of premature breeding, on congenital deformities of the sexual system, endometritis and uterine inversion, uterine fibroids, oöphoritis, and on ovarian cysts, ovarian tumours, diseases of bladder and vagina. They add largely to the value of the volume, as they bring our knowledge of the subjects discussed down to the most recent date, and it is to be regretted that these contributions were not more extensive. For, with all its good qualities,—and we are anxious to show that we believe it possesses many,—Dr West's book is undoubtedly somewhat behind the age, and does not fairly represent the present state of the science of the subject. Dr Duncan's contribution to it goes a considerable way to remove that defect; but his share of the work has been far too small to make it as adequate an exponent of the subject as we could have wished to see it.

Besides the contribution of Dr Duncan, the work gives internal evidence of having been very thoroughly revised by the author. We do not think it necessary to mention these in detail, but among the chapters that give evidence of remodelling may be mentioned those on menorrhagia and dysmenorrhœa, on metritis and endometritis, as also those on diseases of the ovaries and ovariotomy. Dr West makes a full and frank recantation of his previous views as an opponent of ovariotomy, confessing himself in this edition to be an ardent advocate for the operation as now conducted. It will be remembered that in the third edition of his work Dr West supported the operation, but with certain reservations.

When a book reaches a fourth edition it may be regarded as having proved its own merits, and to be largely outside the sphere of criticism. But we may be allowed to state, in conclusion, that the refined taste and cultured feeling which pervade the whole work, the conscientious care and impartiality displayed in balancing the various conflicting opinions and drawing legitimate deductions from them, as also the soundness of the therapeutical principles maintained and proceedings sanctioned, claim for the volume the careful study and attention of all members of our profession interested in gynæcology.

Dr Duncan's lectures are characterized by his usual freshness of thought, accuracy of statement, and completeness of knowledge. The papers embrace a wide range of subjects, on several of which they throw a flood of new light, and on all of which they convey important information. The more original papers are those on the different kinds of perimetritis and parametritis, on painful sitting, irritable bladder, aching kidney, vaginismus, and hepatic disease in gynæcology and obstetrics. All the lectures, however, are interesting and instructive. In regard to the different kinds of perimetritis and of parametritis, Dr Duncan calls special attention to what he calls remote forms of these diseases. By these is meant inflammatory action in various parts of the abdomen which has originated by direct extension from pelvic inflammation, but which persists after the connecting disease, or even the original pelvic inflammation, has entirely subsided.

The different causes, with their diagnosis and treatment, which give rise to painful sitting are handled in a masterly manner. Irritable bladder, that opprobrium of gynæcology, is very fully discussed, and much valuable information communicated respecting its causes, diagnosis, and treatment, as also respecting aching kidney. It will astonish our mechanical gynæcologists to hear that Dr Duncan has never met with a case to satisfy him that the presence of a uterine displacement or distortion gave rise to irritable bladder. In treating of vaginismus Dr Duncan holds that it occurs either as a result of some local disease or simply as a neurosis. In the former case we may expect benefit from treatment directed towards the removal of the local ailment; in the latter it is scarcely amenable to treatment. All heroic measures are rejected.

In his lecture on Spasmodic Dysmenorrhœa the author maintains that the character and amount of the pain prove that it is not due, as usually stated, to the contracting of the uterus to expel clots retained in its cavity by a supposed obstruction. Such pain, we know, is not nearly so severe as that associated with spasmodic dysmenorrhœa, which is often perfectly overpowering. The treatment which he has found most advantageous in this disorder is generally tonic and sedative, locally dilating the cervix and internal os uteri with metallic bougies.

In the lecture on Hepatic Disease in Gynæcology and Obstetrics Dr Duncan endeavours to show, that in the physiological degeneration of the parenchyma of the great glands that accompany the pregnant condition we have an explanation of the tendency to the supervention of icterus gravis during pregnancy. But he further endeavours to correlate this occurrence with the supervention of kidney disease and of some forms of vomiting during the pregnant condition, and expresses the belief that vomiting, when severe and a prelude to a confinement that ultimately goes wrong, is most probably connected with parenchymatous degeneration of the hepatic cells, and owes its gravity to this fact. Icterus is only a symptom, and at times is absent or disappears. These views certainly are eminently suggestive, and deserve the closest attention from the gynæcologist. There are certainly a multitude of facts that seem to point in this direction.

Other specially important papers are those on Chronic Catarrh of the Cervix Uteri, on Uterine Cancer, on Parovarian Cysts, and on Pelvic Hæmatocele. These our space will not allow us to enlarge upon.

We make these remarks to indicate to our readers the nature of the lectures, and to prompt them to read the book for themselves. The opinions are strongly put, and it is not necessary to agree with all the views urged in the book to admire the ability and earnestness infused into the work. We cordially recommend the volume to the attention of all our readers who take an interest in scientific medicine and gynæcology.

*A Treatise on Therapeutics.* By H. C. Wood, M.D., Professor of Materia Medica and Therapeutics in the University of Pennsylvania. Third edition, revised and enlarged. J. B. Lippincott & Co., Philadelphia; and Smith, Elder, & Co., London: 1880. Pp. 720.

This work has long held an acknowledged position. It differs from our British works in the fulness of its details as to the action of drugs, as ascertained by experiment as well as clinical knowledge. It is not a book for the student who merely wishes to pass his examination for a diploma; but for the student who aspires to honours, and for the practitioner who is sufficiently advanced to care about the use of belladonna as an anti-hidrotic, of its action upon the respiratory centres and upon the vesical centres in the cord,—indeed, of its use in medicine,—this work is simply essential. In its arrangement it follows the old plan of arranging drugs according to their action, and not placing the vegetable remedies in their class and order. In this matter, again, this work is not intended for the man who merely wishes "to grind up for a pass;" but it has the advantage of making the matter all the clearer for the man who really desires to know what drugs can do when skilfully wielded. It has an advantage over Ringer's well-known and useful book, that the actions of the different agents are better arranged and put in more telling form. But in order to appreciate the more minute details of this book, the reader should be familiar with the actions of our main therapeutic agents as they are put in Fothergill's *Practitioner's Handbook of Treatment*, after which he will proceed to the study of Wood's book with a certain zest and enthusiasm. But for the purpose of meeting a middle-aged examiner, probably the student is safest with Garrod's book, in which he will encounter no new views to risk his pass. Wood, on the contrary, is full of the most recent additions to our knowledge, especially from foreign workers. In that respect there is no work which comes near his. Indeed, the reader of Wood is well "posted up" in foreign therapeutic researches and on physiological experiments which at all bear on therapeutics, without any necessity for individual exploration of foreign literature.

The most recent views on the action of remedial agents are given, and what is said about the action and the indications for the use of digitalis is well worthy of the attention of every practitioner. Probably the students or practitioners who have got up their materia medica and therapeutics from Garrod's book will feel somewhat as if the world was turned upside down, but their patients will be all the better for their study of Wood. To give the reader some idea of the practical character of Wood's mind, we will quote the following observation thrown in casually among what is said of the use of digitalis in valvular affections of the heart:—"From the considerations which have been brought forward, it is very evident that a knowledge of the relation of the heart-muscle to the work required of it in any individual case is much more necessary to the therapeutist than to know what valve is diseased." Shade of J. Hughes Bennett! what heresy is this which is coming to the front? The real question of how to look at heart diseases from a practically useful point of view is well put in this pithy sentence. Then, again, the consideration of digitalis as a diuretic is judicious and instructive, and ought to be well weighed by every practitioner. He will find diaphoretics discussed in an instructive manner. Jaborandi is described "as the most reliable and influential of all remedies of its class," and a full account of it and its action is given.

Probably not a few readers will be surprised to find that in the list of drugs useful in bronchitis strychnia is mentioned. In no other work on materia medica that we know of is any mention made of agents which are therapeutically useful from their action on the respiratory centres; yet surely, in embarrassment of the respiration, such agents are as clearly indicatory as are those which act upon the respiratory mucous tract. As to expectorants, they "may be arranged under two heads—the nauseant or sedative expectorants, and the stimulating expectorants; and the general proposition may be laid down that expectorants of the first class are to be used in the first stages of acute bronchitis, while expectorants of the second class are to be employed in the advanced stages or in the chronic varieties of the disease. As these diseased conditions gradually merge into one another, so must the practitioner balance the ingredients of his expectorant mixtures, adapting their relations to the individual case." Probably his remarks on the action of opium will interest every reader. It is discussed very fully, and its effects on the different systems given very lucidly. For those who are in the habit of giving opium in pulmonary affections what he says will be very useful:—"Death occurs from opium, in the great majority of cases, by failure of the respiration;" and again, in speaking of opium poisoning, "To maintain respiration is the ultimate object of all the measures which are commonly undertaken for the purpose of arousing the system in opium poisoning. Unconsciousness in itself is of no moment, but as it deepens the sensibility of the respiratory centres grows less, and consequently the involuntary breathing is less rapidly or less perfectly performed." The ordinary measures of inflicting pain, or otherwise preventing the opium-poisoned patient sleeping, are clumsy ways of maintaining the respiration. Strong coffee and the electric battery act directly upon the respiratory centres; but the most rational plan is to administer atropia. Dr Wood says, "Atropia, as a respiratory stimulant, is of the greatest value in opium poisoning when there is evident failure of respiration;" but he does not go into the subject sufficiently. He refers the reader to the article on atropia, and on turning it up a large space is found devoted to its action on the pupil, and very little to its utility in opium poisoning; and if the reader adopts the doses recommended by Dr Wood, probably he will not be very successful, nor will his faith be much increased. The utterly insufficient doses which have been given have been the cause of the failures, as a rule; he talks of commencing with one-fortieth of a grain subcutaneously when there is "decided failure of the respiration." This is almost our only ground of quarrel with Dr Wood; he ought rather to have said one quarter of a grain as soon as toxic symptoms manifest themselves, and repeated when the respiration shows signs of failing. Such is the practice of Dr Johnson of Shanghai, according to Ringer. Dr Wood does not seem to have seen Dr Johnson's article. When the case was very serious he commenced with half a grain. If he had seen, as we have, the effects of a full dose of atropia upon a patient in the last stages of opium poisoning, when, in spite of the battery and other measures, the respiration was all but gone, he would write differently. From impaired respiration the body temperature falls very low, and so the respiratory centres are benumbed in spite of the amount of carbonic acid in the blood, and this fall of the temperature is a grave matter in opium poisoning. Now, if Dr Wood had seen that patient after the injection of one grain of atropia under the skin and being put into a warm bed, if he had seen how the respiration returned, how the pulse rose, and how the temperature mounted up, and, indeed, every symptom of danger pass away before the patient emerged from her opium sleep, then he would have written differently, and very differently, we venture to hope. Indeed, the only defect in his book is this want of a proper consideration of our means of acting directly upon the respiratory centres. The matter is mentioned casually here and there, and the reader referred to other parts of the book; but he nowhere finds the subject fully treated—at least we have not. And yet these means of acting directly upon the respiratory centres are the practically most important matters of recent therapeutic research. We must call Dr

Wood's attention to this omission in the future editions of his work.

The reader who desires more information on the subject of the *modus operandi* of salicylic acid will find all that is yet known given in these pages. On such an old acquaintance as bismuth he will find useful information. The irritant effects found to follow large doses "were due, not to the bismuth, but to the arsenic with which it is contaminated." Pure bismuth is a perfectly safe drug. Bismuth is absorbed to a much greater length than has usually been credited, and "can always be detected, after a few hours, in the urine." Bismuth salts are not only useful in gastric troubles, but in diarrhœa, including that of camps, "and in the chronic bowel complaints of children, especially as seen in the summer season, given with pepsin they are almost invaluable. Topically, these preparations may be used with advantage as desiccant astringent applications in leucorrhœa, in gonorrhœa, and in irritable external ulcers." And so on.

It is a thorough pleasure to review a work of this kind. Full of information well arranged,—with what empiricism has taught us well digested and arranged alongside the most recent physiological investigations, so that the latest ray of light is thrown on the *modus operandi* of our remedial agents,—this work will take its place not only among our standard works, but even abreast Pereira's great work. It is not enough to say that it ought to be found in the library of every practitioner; rather we prefer to say that it should not only be in his library, but it should be well thumbed, and bear indisputable evidence on every page that the owner of it has "read, marked, learned, and inwardly digested it;" and if he has, his patients cannot but be benefited thereby.

*Atlas of Skin Diseases.* By LOUIS A. DUHRING, M.D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania. Part. VI. Philadelphia: J. B. Lippincott & Co.: 1879.

DR DUHRING has again afforded us an opportunity of reporting on the progress of his Atlas, which fully maintains, in the part before us, the reputation of the previous ones. The subjects chosen for illustration are syphiloderma (pustulosum), erythema nodosum, seborrhœa, and eczema papulosum. The characteristics, both as to colour and grouping, of the pustular syphilide are faithfully reproduced. The predominance of erythema accompanying the pustules on the face, as compared with the trunk, is given due prominence to. This form, often, though erroneously, called acne syphilitica, is peculiarly apt, when not treated, to leave scars; but it is valuable to have Dr Duhring's assurance that when properly managed scar-ring does not result. Its outbreak is often ushered in by considerable feverishness and constitutional disturbance, and this was relieved in the case before us by the exhibition of moderate doses of sulphate of magnesia, combined with small ones of antimony and aconite. Thus the suppurative process was arrested, and the treatment was changed for a mild mercurial one. Erythema nodosum is pictured just at its height, or when tending to fade, and is a perfect representation of a common though singular complaint. Seborrhœa is shown occupying the face and scalp of a young man, and is a valuable plate for diagnostic purposes, the points of resemblance and of distinction between this and lupus sebaceus being fully and carefully brought out. The fourth plate, devoted to papular eczema, is no less life-like. It represents a condition formerly regarded as lichen agrius, but now more properly classed as an eczema, and the value here is the aid it gives in eliminating lichen ruber. Dr Duhring has wisely made eczema a strong point in his Atlas, and has figured this protean disorder in not a few of its more puzzling varieties. The descriptive letterpress is written clearly, sensibly, and well, and no higher praise can be given than by stating that this part in nothing falls short of the excellence of its predecessors.

*Photographic Illustrations of Skin Diseases.* By GEORGE HENRY FOX, M.A., M.D., Clinical Professor of Dermatology, Starling Medical College, Columbus, O. New York: E. B. Treat: 1879. Parts I., II., III., IV.

SOME years since Mr Balmanno Squire brought out a series of coloured photographs illustrating various skin diseases, but photography had not then the delicacy which improved processes have endowed it with, and the pictures were hardly so successful as could be desired. Professor Manassei of Rome, a couple of years ago, published an atlas of photographs of cutaneous diseases, some of which were coloured, and all of singular beauty and clearness, due in part, no doubt, to the purity of the Italian sky. The letterpress, however, being written in his native tongue, rendered the volume a sealed book to many English readers. Dr Fox has favoured us with the first four parts of his photographic illustrations of skin diseases, which certainly bear the palm in a comparison with the two we have mentioned. The plan upon which this atlas has been devised is an admirable one. The author, who is in charge of the skin and venereal department of the New York Dispensary, where upwards of 5000 of such cases are treated annually, has had between two and three hundred photographs of typical cases taken, not only from this, but from other sources. A selection of the best of these has been made, and, as reproduced by the permanent autotype process, constitute the atlas now being issued. It is evident that such skin diseases in which there are inequalities of surface will come out best as photographs, and the success has certainly been greatest in those in which variation in colour does not occupy the first place. The two first plates, devoted to comedo and acne vulgaris, are simply perfect, and the same may be said of a picture of elephantiasis in a young female. Two plates illustrating zoster, though small, are admirable delineations, and, unlike drawings, exhibit new features when viewed with a lens. Fibroma, varicella, lepra, leucoderma, favus, keloid, eczema, rosacea, and ichthyosis are among the other affections which are included in the parts before us. In all the peculiar characters of each are well marked and distinct. Much care has been taken with the colouring, and the artistic manner in which it has been applied is due in great measure to its having been entrusted to a medical man who has studied skin diseases under Professor Hebra. Each plate is accompanied by two pages of letterpress. A short, tersely-worded description is given of the subject of illustration, and this is followed by more general remarks bearing on the disease of which an example has been presented. The latest views as to its nature and treatment are represented; and if the present excellence is maintained, the atlas is destined to take a first place among works of its class. It is to be completed in twelve parts, containing forty-eight plates in all; these are to be issued monthly. As is usual in American works, the paper and printing are excellent. We hope to be able to express an equally favourable opinion on the parts which are to follow.

*The Lay of the Bell, and other Ballads, by Schiller.* Translated into English Metre by ANDREW WOOD, M.D., LL.D., F.R.S.E., Fellow of the Royal College of Surgeons of Edinburgh, Member of the General Council of Medical Education and Registration of the United Kingdom. Crown 8vo. Pp. 147. Edinburgh: W. P. Nimmo & Co.: 1879.

IT must be very difficult, under any circumstances, to translate adequately into a foreign tongue the thoughts, feelings, and finer sentiments of a real poet such as Schiller. Even a prose translation must be difficult; how much more a metrical one, with its unavoidable impediments and hamperings! Fancy the attempt, not merely to *do* into German, but to convey the subtile allusions and beauties of Robert Burns,—fancy such an attempt at all successful, and we can form some estimate of the self-imposed task which Dr Wood has undertaken. In his interesting and well-written introduction he likens, and with some justice, probably, one of the ballads—"The Knight of Toggenburg"—to certain of our own Border ballads; and this shows that the delicacy of touch required in the handling was present to his own mind. But it appears to us that Dr Wood has intensified very considerably and unnecessarily the hardness of his undertaking by causing the German poems and the English rendering of them to be printed on opposite pages of his book. By thus limiting his space he has in some measure precluded himself from paraphrasing his translation, and so bringing out the nicer and more delicate points of the original. Of course, if the English version can be made as terse and compact as the corresponding German, a great feat is accomplished, but there is always the chance that the bloom and aroma are sacrificed.

Having thus set Dr Wood's difficulties before our readers, we must now say that he has surmounted them to a remarkable extent. That there are some lame and impotent lines cannot be denied; but how could it be otherwise? Even from the translations the beauty of the original pieces may be distinctly seen; and the latter being short, the reader can peruse them without being wearied.

*Nathan the Wise,* by Lessing, which we noticed a year or two ago as translated by Dr Wood into blank verse, had the great advantage of a story invested with dramatic form, and could therefore be read with unabated interest. The present volume contains seven ballads, varying in length. There is not much of a story in any of them; but being introduced by appropriate explanations, they are quite intelligible, and maintain an interest of a peculiar kind from beginning to end.

We again, as formerly, express our conviction that the author is a bright example to younger men than himself, by thus occupying the intervals of a busy professional life with these repeated excursions into the domain of polite literature. We think that the buoyancy and freshness of mind as thus evinced by a septuagenarian ought to have a salutary effect on those who allow themselves to be too completely and exclusively occupied with the daily toils of an arduous profession.

*Bible Hygiene; or, Health Hints.* By a PHYSICIAN. London: Hodder & Stoughton, Paternoster Row, 1879. Pp. 244.

WHO the anonymous writer of this excellent book is we do not know. That he is a very intelligent and well-equipped physician cannot be questioned; and that he possesses a reverential, receptive, and unprejudiced mind appears from every page of his thoughtful, mature, and well-written treatise. The scientific treatment of the subject is quite abreast of the present day, and is so clear and free from unnecessary technicalities that readers of all classes may peruse it with satisfaction and advantage.

The author is right when he says " the time is fast approaching when physicians will be oftener consulted regarding the prevention of disease than about its cure." This is daily becoming more evident. Some of us remember the time, when the origin of most diseases in an ignorance and neglect of hygiene, both personal and social, was practically unknown and hardly even suspected. That the *exanthemata* and other infectious diseases might be disseminated, and perhaps aggravated, by the neglect of sanitary laws was sometimes suspected; but it required a medical man to be exceptionally enlightened and in advance of his time, to perceive that almost all bodily, and some mental disorders, were the results of personal inattention to hygiene and of unfavourable surroundings. It is intensely interesting now to discover, as our author elaborately demonstrates, that the writer of the Pentateuch, under Divine direction, laid down 1500 years B.C. injunctions which were admirably fitted to secure the health of the Israelites if rigorously followed,—injunctions, moreover, which virtually endorse all the sanitary discoveries and doctrines now at last painfully reached by us in this nineteenth century of the Christian era.

It is to be specially noticed that the hygienic laws delivered by Moses to his countrymen must have been regarded as supremely important, because accompanied by the sanctions and threatenings of Divine authority; and therefore, if we neglect the lessons which—with modifications suited to our altered circumstances—they are fitted to teach us, we shall manifestly do so at the risk of much physical suffering and mortality which might otherwise be prevented.

The importance of the subject was exhibited many years ago by George Combe in his *Constitution of Man;* it is now stated with new force by our intelligent author, who points out that what Combe regarded as natural laws, discoverable by human observation, are really laws of God, declared as explicitly as those other laws which are more strictly of a moral and religious character.

Almost every topic connected with hygiene has a chapter devoted to itself, and it is remarkable how a light from the Bible illuminates all of them to a greater or less degree. It might be supposed that the important subject of air and ventilation would be left out, and so the author seems to think, for he says (p. 129), "The Bible says nothing about foul air or ventilation; but the great danger of the one and the importance of the other are shown indirectly and forcibly by the carefully planned and executed public hygiene of the Israelites." He then goes on to expound the subject in a clear and interesting manner. We would direct his attention, however, to a passage in the book of Acts, xx. 7–12, where an incident is recorded bearing very closely on the matter in hand. We read in verse 8, "There were *many lights* in the upper chamber where they were gathered together." The writer was Luke, the beloved physician, as he is elsewhere called. He shows how the young man could not help falling asleep even when the great

Apostle of the Gentiles was preaching his farewell discourse. The ventilation must, with these many lights, have been very defective in that upper chamber; and he both palliates the apparent offence of Eutychus and suggests a topic worthy of serious consideration during all the succeeding centuries. How long and how often has Luke's suggestion been overlooked!

We have much pleasure in recommending this treatise to all who are now studying the profession; for hygiene is doubtless coming to the front.

# Part Third.

## MEETINGS OF SOCIETIES.

### MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

### SESSION LIX.—MEETING IV.

*Wednesday, 4th February* 1880.—Dr P. H. Watson, *President, in the Chair.*

I. *Dr Cadell* showed a patient, a little girl, who had two years before suffered from an abscess connected with the ankle-joint. At one time amputation was considered necessary, but the child's father refused to permit the operation. The abscess was opened, and treated without any antiseptic. The child had now a useful foot, with just a trace of stiffness.

II. *The President* exhibited parts removed from the body of a patient who had died suddenly from the rupture of an aneurism which had formed in connexion with the aorta, where it passes between the pillars of the diaphragm. Some days before death the patient had been attacked with pain in the hepatic region, from which, however, he had apparently recovered. Gall-stones were found in the gall-bladder.

III. *Dr James Carmichael* exhibited the BOWEL of a child, nine months old, who had died after six days' illness from intussusception. The illness had gone on for some days before the case was seen by Dr Carmichael. On introducing the finger up the rectum, a large knuckle of bowel was at once met with, which by strong expulsive effort followed the withdrawal of the finger and was subsequently retracted. Before death the bowel was extruded to a large extent from the anus. Mr Chiene, who was consulted as to the propriety of surgical interference, concurred in thinking that this was not justifiable, owing to the gangrenous odour imparted to the examining finger per rectum. On post-mortem examination it was found that the entire colon, along with about a couple of inches of the ileum, was invaginated into the sigmoid flexure of the colon.

*Mr Chiene* said that, in recommending that there should be no operation, he had believed the gangrene to have gone further than the post-mortem examination showed it to have done.

At the suggestion of the President, who considered the case one of special importance, Dr Carmichael promised to make it the subject of a paper.

IV. *Dr Miller* showed an ARM removed from a patient who had suffered from gangrenous erysipelas of the hand and arm. When the patient was admitted to the erysipelas wards of the Old Infirmary the greater part of the skin on the back of the hand was gangrenous. Amputation was performed on account of hæmorrhage which occurred in connexion with an extension of the gangrene. The man survived the operation ten days, and would probably have done well had his constitution not been shattered by the erysipelas and a life of intemperance. Dr Miller stated that he purposed laying before the Society at an early date an account of the cases which had been under his care in the erysipelas wards this winter.

The *President* said that such a communication would be received with satisfaction.

V. *Dr Cadell* exhibited a TUMOUR removed from the mammary region, but which had not implicated the mammary gland; and some MEMBRANOUS MASSES obtained in a case of plastic bronchitis.

VI. *Dr Allan Jamieson* read a paper on GENERAL EXFOLIATIVE DERMATITIS, for which he was thanked by the President, which will appear in an early number of this Journal.

VII. The *Secretary* read notes by Mr John M'Watt on two cases of SPINA BIFIDA IN THE CERVICAL REGION, which had come under his care in the Edinburgh Royal Infirmary. Both cases were treated by the injection of Dr Morton's fluid. In the one a complete cure was effected, and in the other the patient was dismissed with the tumour hard and small, but subsequently died of hydrocephalus.

*The President* said these cases were of an interesting character, as bearing especially on the good effects of Dr Morton's treatment of the injection of the solution of the iodide in glycerine. It seemed to him that the good effects of this plan of treatment were to be referred to the fact that there was no diminution of the intra-spinal pressure. This was produced by all the other methods. One could quite conceive that the removal of the fluid in considerable quantity would give rise to such an altered hydrostatic condition as to cause risk of cerebro-spinal irritation. He believed that in many cases the varying results of the treatment by injection would be found to depend upon the relation between the cystic sac and the nervous elements of the cord in the part affected. In some cases the formation of the sac had seemed to have been due to a dilatation of the central canal of the cord. In other instances the whole of the elements of the cord in their normal condition were seen within the spinal canal and unaffected by the cyst, which was quite external to them. He thought that the extra-spinal cases would be found to be those in which the treatment of Dr Morton would be most successful, while those where the cyst was formed inside the canal would be found to be less satisfactory.

*Dr Jamieson* stated that some months ago a friend of his had tapped with an aspirator a tumour about the size of a child's head over the sacrum of a woman twenty years of age. A large quantity of clear fluid came out, and the aperture was closed up without any injection. That, however, did not prevent more drainage of fluid from the tumour. Inflammation set in, and the patient died. This case perhaps pointed the moral, that where Dr Morton's or some similar treatment was not to be used such tumours had better be left alone.

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## OBSTETRICAL SOCIETY OF EDINBURGH.

### SESSION XXXIX.—MEETING III.

*Wednesday, 10th December.*—Dr ANGUS MACDONALD, *President, in the Chair.*

I. *Professor Simpson* showed a PLACENTA with a velamentous insertion of the cord. The placenta was entire, and not divided, as is sometimes the case with this malformation.

II. *Dr Croom* showed a FŒTUS with INTRAUTERINE HYDROCEPHALUS. The patient had fallen in labour on Thursday morning, a midwife being in attendance in the evening. She was seen by a practitioner, who diagnosed the condition and applied forceps. He was unable to deliver her, however, and sent for Dr Croom. When seen by him, he was struck with her collapsed, clammy state. The pulse was 130, and weak. Owing to her condition, he did not examine her abdominally, but perforated the head with a trocar and extracted with forceps. On introducing his hand he found a conjugate at the brim of 3″, and the body of the uterus torn from the cervix anteriorly. The patient never rallied, and died in three hours. The case was evidently very similar to one related by the President on a previous occasion.

III. *The President* showed a specimen of UTERINE HYDATID, or MYXOMA OF THE CHORION, which, although small, represented at least a seven and a half months' pregnancy. He had been asked to see the patient in consultation. Hæmorrhage had been present for about two months, but unfortunately none of the discharges had been kept. In this way it was impossible to determine its nature by the characteristic appearance of white currants floating in a red jelly. There was no doubt of its being a seven and a half months' pregnancy, as indubitable signs pointed in that direction, but the size of the abdomen corresponded to about four months.

The diagnosis arrived at by the medical attendant of the patient and himself was that it was a missed abortion, probably due to myxoma of chorion. Two or three days afterwards the mass now exhibited was expelled without much hæmorrhage, thus confirming the previous opinion. No fœtus could be detected.

IV. *Dr Angus Macdonald* then read his paper on the TREATMENT OF ABORTION, which appeared at page 676 of this Journal.

*Dr Croom* thanked Dr Macdonald for his interesting communication on a practical subject. The paper, however, had been so full that there was little room for discussion. He had found most difficulty in differentiating between cases of threatened and real abortion, in deciding between when to opiatize and when to plug. The occurrence of gushes of blood was a sure sign, and of course where the os was open and a presenting mass felt there could be no doubt. He agreed with Dr Macdonald in his remarks on plugging, but thought it should be done with the aid of a Sims's speculum. Styptics were not needed; all that was requisite was to open up the vagina with the speculum, and then to pass plugs of cotton wadding thoroughly into every nook and cranny, finishing up with the application of a T bandage. It was impossible to insist too strongly on the complete evacuation of the uterus after abortion. He did not see the advantage of curetting the uterus over that of hauling it down with a volsella and using the finger nail, as Professor Simpson had recommended in his communication on the complete evacuation of the uterus after abortion. In other respects he agreed with Dr Macdonald.

*Professor Simpson* thought Dr Macdonald's paper was full and exhaustive. But the subject was one that had already been well worked out; and a recent report in the *Centralblatt für Gynäkologie* had rightly enough referred to it as a theme now "rather threshed out." In one or two points of detail, where the author objected to the procedure advocated by him (Dr Simpson) in his communication on the same subject to the Society a few years ago, he was convinced that further experience would yet show Dr Macdonald that he was mistaken. The objections, for example, to the use of the volsella were purely hypothetical. He (Dr Simpson) had not yet met with any case where bad consequences had followed the dragging down of the uterus, and he could promise Dr Macdonald that he would yet meet with instances where he would be glad to employ it, and find it a most satisfactory means of gaining access to the uterine cavity. Again, he agreed with Dr Croom that they should not use curettes. In cases where fragments were still present some time after abortion, he agreed with Thomas and Mundé that Thomas's curette was best. The addition of a knob 2½″ from the point made it more useful. When a stronger curette was needed, it was best to employ Recamier's. While he endorsed the general well-established principles of Dr Macdonald's paper, he would take exception to any routine injection of the uterus with carbolic acid as a piece of superstitious antisepticism. He would advocate it only where putrescence, its clearest indication, was present. His belief as to the management of abortion was in active treatment with the hands and sponge-tents carefully disinfected. Beyond that, he left the uterus alone, and only used intrauterine injections when hæmorrhage or putrescence called for their employment.

*Dr James Carmichael* did not think Dr Macdonald's curette, which was a rigid instrument, was, strictly speaking, comparable to Thomas's, which was in reality a flexible one, and could only be used successfully when the vagina was made into a canal by the use of the speculum, and the uterus drawn down by a hook or volsella. The special idea of Thomas's curette was to do away with rigidity. He could not say anything as to particular treatment. He had been interested in Dr Croom's description of the way to plug the vagina. Most of his experience in plugging the vagina in practice had been to the effect that it could be efficiently plugged with simple materials, viz., a sponge, silk handkerchief, etc. He had also plugged the cervix with lint or strips of bandage pushed in with a uterine sound.

*Dr Andrew* had listened with pleasure to Dr Macdonald's paper. He was not fond of intrauterine injection, and objected to it being made a routine practice. He had often seen Dr Macdonald plug the vagina in the way described by Dr Croom.

*Dr Wilson* thought that one point not noticed was, whether in some cases, where the abortion took place after the patient had been laid up for a week, it would not have been better to have completed the case at first. Plugging, when employed, should be effectual. He generally used a weak solution of iron along with it. He had the same objections as Professor Simpson and Dr Andrew to routine intrauterine injections of carbolic acid. In nineteen out of twenty cases it was unnecessary. With regard to the use of the curette, he thought the finger was preferable.

*Dr T. R. Ronaldson* had never yet plugged the vagina, as he always used the sponge-tent. He thought that a firmly-plugged vagina might prevent the uterus expelling its contents. When the sponge-tent was used to plug the cervix, the uterus could expel both it and the abortion. Then the sponge-tent was easier of application, as well as safer. He had often found difficulty in deciding whether the uterus was completely empty or not. When in doubt, he had always introduced his finger into the uterine cavity. In future, he would employ the volsella to facilitate this.

*Dr Bruce* felt indebted to the President for his paper. Although many of the points were quite familiar to those connected with hospitals, it was useful to practitioners to have them brought up now and then. He had seen many cases of abortion, and found most of them easy, but occasionally they were very troublesome. When there was much discharge of blood, he generally used the sponge-tent. He remembered one case of continuous flooding where he used a sponge-tent and plugged the vagina also. During the night everything was expelled, sponge-tent, plug, and an immense number of hydatids. He agreed with Professor Simpson that the use of the volsella and finger was better than the curette.

*Mr C. H. Thatcher* mentioned a case at second month where a practitioner introduced two sponge-tents consecutively. The patient went on, however, to full time.

*The President* thanked the Fellows for the reception accorded to his paper. There had, however, been in the discussion considerable misconception in regard to his remarks on plugging the vagina and curetting the uterus. He was against plugging the vagina unless the uterus was empty and the hæmorrhage so severe as to be threatening to life, and he thoroughly agreed with Dr Ronaldson in saying that it was not so effective as the sponge-tent in ordinary circumstances. He had strongly objected to imperfect plugging of the vagina, however, which, notwithstanding the statements of some Fellows to the contrary, he knew to be far too frequently resorted to. He had never found any danger arise from curetting or washing out the uterus. He did not recommend the latter as a piece of routine treatment, nor did he advocate promiscuous curetting, as would appear from the turn the debate had somehow taken. He thought it an admirable proceeding in cases seen late, where part of the membranes had been left behind and the cervix was too tightly contracted to admit the finger into the uterus. But he was as strongly convinced as any of the Fellows could be, that when the finger could be used it was far better than any curette.

V. *Dr Croom* then read a paper on the CAUSATION OF SOME PRIMARY FACE CASES, which appeared at page 709 of this Journal.

*The President* remarked on the interest of the paper, and the wide field of controversy it opened up. He hoped it would meet with due attention.

*Professor Simpson* thought with the President that the subject introduced by Dr Croom was an admirable one for discussion. Dr Croom had done well, however, in limiting it. He had not met with a case of intrauterine face presentation, and felt interested in Dr Croom's one, as it had been so long and carefully observed. He had listened to the paper with care, and the only criticism he would make would be as to the right obliquity of the uterus producing a right occipito-posterior case. This was the ordinary obliquity in left occipito-anterior presentations. Dr Croom's explanation of the cause of the face presentation in this instance did not influence the usual theories as to their etiology. He had done well to record this extremely interesting labour.

*The President* had been extremely interested in the thorough and indubitable observation of the persistency of the presentation made by Dr Croom. There were doubts in the professional mind as to whether primary face cases ever existed, and he had doubted it himself. This case showed a curious abnormality, viz., a great development of the extensor muscles; and if Dr Croom's view of the causation was correct, the condition amounted to a sort of monstrosity, and therefore did not touch the general assumption that it was impossible for a well-formed child in a usually-shaped uterus to maintain for any length of time the condition of extension involved in a primary face position. It was further curious that the muscles of the neck were not able to prevent flexion of the head at the delivery.

*Dr H. M. Church* had recently attended a case of face presentation occurring before the membranes ruptured. When the head entered the pelvis, rotation of the chin forwards did not take place, and labour did not progress. The head not being so low in the pelvis as to render version impossible, this was performed, but the child was still-born.

*Dr Croom* thanked the Society for the reception accorded to his paper.

# Part Fourth.

## PERISCOPE.

### MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By Angus Macdonald, M.D.

The Diagnosis of Large Ovarian Tumours.—In No. 1, *Centralblatt für Gynäkologie* for the present year, Dr B. S. Schultze of Jena records two illustrative cases in support of the value of the method of diagnosis recommended by him in No. 6 of the same Journal in 1879, and already reported in our retrospect, vol. xxiv., p. 1131. This method consists in putting the patient deeply under chloroform, subjecting the tumour to alternate elevations and depressions and displacements from side to side by means of an assistant grasping it through the abdomen, whilst the examiner practises the abdomino-rectal manipulation, and is able to satisfy himself of the presence or absence of a uterine or ovarian connexion with the tumour, the length of the pedicle, the character of it as to breadth and thickness, etc. Two extremely important cases are recorded, in which the diagnosis of an ovarian tumour, and the exact nature of its pedicle and source of origin, was readily made out by Schultze, notwithstanding that subsequent operation proved that the tumour had the most extensive adhesion to the abdominal wall, the omentum, colon, etc.

Schultze argues that the application of this method as a means of exact diagnosis is wider than he had expected, and that the most extensive adhesions do not destroy its value. It therefore, according to him, will enable the operator to proceed in many otherwise doubtful cases directly to operate, when he would have, without it, required to make an exploratory examination.

ON THE ELUCIDATION OF THE INDICATIONS FOR TREATMENT OF ANTI- AND RETRO-VERSIONS AND OF ANTI- AND RETRO-FLEXIONS OF THE UTERUS is the subject of No. 176 in Volkmann's *Collection of Clinical Lectures* by Schultze, and is abstracted in No. 2 of the above-mentioned *Centralblatt* for 1880. The author briefly explains his position on the question of versions and flexions. Generally, the importance of changes of position is asserted, but care is taken to guard against the theory that the same etiology and the same treatment is to be held as self-evident in the case of retroflexions and antiflexions and versions. The intrauterine stems are altogether rejected. Whilst in retroflexions fixation of the fundus is secondary as an etiological influence, relaxation of Douglas's folds primary, in antiversion we find the reverse the fact, viz., the pathological shortening of Douglas's folds to be the primary etiological influence. Some diagrammatic drawings indicate in the most simple and clear manner the views of the author. The legend of obstructive dysmenorrhœa, which has legalized so many fatal therapeutic procedures, is to be utterly rejected. That flexion of itself can condition stenosis the author emphatically denies. The hope is expressed that this view, stated authoritatively, will contribute to definitely liberate German gynæcology from the fetters of imported opinions unfortunately too readily accepted. In antiversions and antiflexions the author sees generally no indication for mechanical treatment. It is possibly a mistake to attempt to replace even retroflexions and retroversions with the pessary. We must first replace the uterus by hand; then the pessary has the single object and the single aim of retaining the now normally situated uterus in its normal position.

DISPLACEMENTS OF THE UTERUS—A NEW THEORY OF THEIR MECHANISM AND TREATMENT, by Dr G. Cowan, Kentucky, is communicated to the *American Practitioner*, 1879, and abstracted in No. 2 of *Centralblatt*, 1880. The author describes the different theories of the text-books respecting the uterine supports, and the origin of displacements by distension, relaxation, or shrinking of these supports, and concludes, on the ground of anatomical and logical investigations, that neither the vagina broad and round ligaments nor the utero-vesical nor utero-sacral ligaments are to be looked upon as the primary supports of the uterus. For it can be proved experimentally that they are not put on the stretch until displacement has already occurred, and therefore when the uterus is in its normal position they are not tight, and accordingly cannot support the uterus. All that these ligaments do is to retain the uterus in its proper axis. The power of support the author now finds in the direction of the intra-abdominal pressure, which, according to him, acts as follows:—The intestines glide upon three planes in an arched line downwards and backwards—namely, first, the anterior surface of the 9th, 10th, 11th, and 12th dorsal vertebræ, the 1st, 2d, and 3d sacral vertebræ, and the adjoining lateral surfaces of the abdominal cavity; second, the lower anterior and inner surface of the abdominal cavity, and the inner surface of the symphysis and ossa pubis; third, the inner surface of the rami ischii, the anterior and upper surface of the perineum, and the adjoining surfaces of the vagina and of the rectum, to which, by the coccyx and sacrum, an upwards and backwards concave direction is given. The mobile abdominal viscera glide now from the first plane downwards and forwards upon the fundus uteri and bladder; from thence the pressure passes by the second surface downwards and backwards on the third plane, and from this directly upwards and somewhat backwards upon the uterus and its ligaments, which is therefore compressed by hydrostatic pressure from before and under against the rectum, and is kept in a floating position. The uterus is to be compared to the keystone of a reversed arch, but with the thick end of the stone upwards. The bowels press now upon the arched bladder; the uterus is pear-shaped, and is held down anteriorly by the vesico-uterine ligaments, together with the ligamenta lata and the anterior and posterior duplicatures of peritoneum kept in the axis of the pelvic inlet, and can escape from this pressure directed upon it forwards and under only in the upwards and forwards direction. Were the small end of the keystone directed upwards, as it would be in a reversed arch, this same pressure would displace the uterus downwards.

On this ingenious theory the author briefly bases his treatment. In conjunction with pessaries made according to Hodge's principle, he proposes in the case of displacements, mostly in multiparæ with relaxed abdominal walls, to replace the absent second plane, the tight anterior abdominal wall, by means of a tight, accurately-fitting binder, which in every displacement, and immediately after every delivery, is to be put on and worn until the abdominal wall has again recovered its tone. The relief which at any rate most women with uterine displacements feel in wearing such an abdominal binder, the author explains by the pressing up of the uterus according to his theory, not, as hitherto, by the removal of the pressure of the bowels on the irregularly situated uterus.

THE DIAGNOSIS AND TREATMENT OF OBSTETRIC CASES BY EXTERNAL MANIPULATION, BY DR PAUL MUNDÉ. Second Article. (*American Journal of Obstetrics*, October 1879.)—We regret much to find that the brief note we added to our short abstract of the first part of this paper in the December retrospect has hurt the author's feelings. We have carefully re-read the paper, and are willing to confess we were somewhat mistaken in our idea of the object aimed at by Dr Mundé, which we find was less to instruct obstetricians than to spread a knowledge of this useful branch of gynæcology among the profession. As we regard the papers to be extremely well calculated to effect this object, we now include some parts of the first paper not given fully enough in our first reference, along with an abstract of the second part of the paper.—[A. M.] The external method of manipulation is described, for diagnostic purposes, under four heads—inspection, palpation, percussion, and auscultation, and the information gained by each of these is minutely discussed. Under the head of inspection the author especially mentions the appearance, originally pointed out by Bandl, recognisable when there is some obstacle to the passage of the head, as in contracted pelvis, namely, a transverse furrow about midway between the umbilicus and pubis, due to the futile concentric contractions of the uterine body, when the cervix is jammed against the pelvic brim by the presenting part. He says he has himself seen the same phenomenon in excessive pelvic obliquity with consequent antiversion of the uterus. Under palpation Dr Mundé advises that not the tips of the fingers merely should be used, but that the palmar surfaces of all the fingers should be gently but firmly pressed into the abdominal parietes. By a "pawing" movement we get an idea of the general configuration of the uterus; by pressing deeply behind the uterus from above we ascertain the period of gestation; by moving the hands along side by side we may feel the mobile portions of the fœtus; while by grasping the hypogastric region with the whole hand the presenting part, whether head or breech, is known. External ballottement will determine the amount of mobility of the fœtus. Any abnormality of the uterus is also often easily detected thus, *e.g.*, subperitoneal fibroid tumours, uterus bicornis, etc. The regular intermittent contractions and relaxations of the uterus, described by Braxton Hicks as a sign of pregnancy, is also a late outcome of this practice of palpation. The movements of the fœtus also serve to show the undoubted presence and life of the child, the probable quantity of amniotic fluid, and the approximate size and strength of the child. Rules are also given for guiding us to a knowledge of the presentation in a given case, whether head, breech, or transverse, and how the presence of twins may be predicted. The death of the fœtus, the character of the uterine contractions, hydrocephalus, rupture of the uterus, and extra-uterine fœtation, may all be made known in time for treatment when skill is acquired in the application of the method. From percussion we are enabled only to confirm information obtained by the other modes of procedure. From auscultation important data may be furnished, and of these the one of most value is the pulsation of the fœtal heart, which has been heard in some cases as early as the fourteenth week of utero-gestation. The author recommends the method of immediate auscultation as giving more certain signs of the life or death of the fœtus. Certain important aids to the diagnosis of the position and presentation of the fœtus are also demonstrated to be obtainable from auscultation. In attempting to predict the sex of the fœtus from the number of its heart-beats, the author suggests that we should remember that several modifying influences have to be taken into consideration—as the period since food was taken, the fœtal pulsations being more rapid after meals—and the size of the child—the larger the child the fewer pulsations of its heart, and conversely, whatever be its sex. In a paper by Paul Budin and Chaignot it is stated that there is no relation whatever between the weight, cardiac pulsations, and sex of the fœtus. The general opinion of the later observers amounts to the possibility of a "shrewd guess" being made as to the sex of a coming child, but nothing more, and it would be unwise to hazard an opinion in any given case. Various opinions regarding the causation of the funic souffle are mentioned, one holding that it is due to pressure on the cord from twisting round the body, another that it is due to organic valvular disease of the fœtal heart, a third that it results from rapid influx of blood from the small arteries into the disproportionately large cavities of the heart, while according to Schroeder it originates in the arteries of the cord at their junction with the body of the fœtus. Another theory would have it generated in the umbilical vein. The practical deduction which the author draws from a consideration of all the possible theories is that it indicates obstruction in some form to the fœtal circulation, and he calls attention to the necessity of carefully watching both the fœtal heart and the funic souffle, as any irregularity or growing indistinctness of the fœtal heart, coupled with the persistency and increasing force of the souffle, points to some cause endangering the life of the child.

DISEASES OF BLOODVESSELS OF THE OVARY IN RELATION TO THE GENESIS OF OVARIAN CYSTS is the subject of a highly interesting and original contribution to the January number of the *American Journal of Obstetrics* by Dr Noeggerath of New York. The object of the paper is to demonstrate that the development of a certain percentage of ovarian cysts is due to certain alterations and enlargements of bloodvessels, and thus is formed a variety which the author thinks ought to be called *angioma cysticum*. The conclusion arrived at in the paper is founded upon careful microscopic examination of pathological ovaries, especially of six ovaries removed by Batty's operation from young girls. Dr Noeggerath found that the structures usually described as *corpora albicantia* were frequently due to enlargement and degeneration of bloodvessels. The coats of the vessels are enlarged, with diminution, though rarely obliteration, of their lumina. The process commences apparently with œdema of the intima or adventitia, whilst the single fibres of the connective tissue element become individually indistinct, melting together, as it were, and ultimately appearing like an aggregation of very finely split up white elastic tissue fibrils glued together. With time the nuclei grow thinner and shorter, assuming shapes occasionally like what are met with in myxomatous tissue. The process could be traced, passing through different stages, from a period when the loops of bloodvessels could be distinctly made out to the time when nothing could be detected but a homogeneous mass. In the small arteries there could be detected a hyaline degeneration of the connective tissue of the intima and of the intermuscular connective tissue, and also a growth of the cellular elements of the media both in number and in size, with the effect of almost entirely obliterating their lumina. The structure formed by degeneration of the bloodvessels of a vascular territory, although exceedingly like a corpus luteum, is capable, Dr Noeggerath says, however, of being differentiated from it by careful examination. The cells comprising the corpus luteum are deposited in meshes of irregular shape, and are more or less spherical; the degeneration of arteries, on the other hand, has its cells deposited in interstices resembling an oblong rhomboid. The cells comprising a corpus luteum are coarsely granular and yellowish; those of the arterial degeneration are only slightly granular. On further development the cellular element of the corpus luteum gradually gives way before the growth of the connective tissue part of it, the degeneration loses its fibres by atrophy, owing to the growth of single cells. In consequence we have first the formation of an irregular cavity in the centre, containing broken up cells. Gradually all the cells comprised within the group of disorganized vessels become disaggregated, softened, and dissolved. Exosmosis adds to the now increased serous portion, and there results a small cyst whose walls consist to a large extent of normal ovarian tissue. These cysts are not lined with epithelium, and are probably of slow growth. In further developing the subject Dr Noeggerath considers other changes which take place in the coats of ovarian vessels and finally result in the formation of cystic cavities. One mode of development he attributes to a kind of endarteritis destruens. Here at the commencement a large number of vessels, chiefly arteries, are found closely aggregated together. These have the peculiarity that the elements of their media have increased in number and in size, so as to make the intima appear in a state of atrophy. These ultimately develop into well-formed layers of muscular tissue. Still the several bundles are so arranged that we can without difficulty recognise their development from vessels. The characteristic peculiarity of these masses is that a large number of fissures of oblong shape, and each containing a cell, are arranged concentrically round them. These are larger the nearer the centre or lumen of the vessel they are placed, and they tend to enlarge so as to break up the tissues and empty their contents into the lumen, which thus becomes enlarged and dilated into a cyst. Dr Noeggerath is further driven to conclude that in a certain number of cases those epithelial tubes found in ovaries as precursors of ovarian cysts are not derived, as Waldeyer, De Sinety, Manassez, etc., believe, from germinal epithelium, but from the tissue comprising the capillary bloodvessels, as he finds the microscopical characters of undoubted vascular changes seen by himself come exceedingly near in general appearance to these so-called tubes as figured by Waldeyer.

THE PROGNOSIS OF CÆSAREAN OPERATIONS is the subject of an article by Dr Lusk of New York in the January number of the *American Journal of Obstetrics.* In this paper Dr Lusk, after recounting the results obtained by various well-known operators and analyzing the details given of the cases, arrives at the conclusion that the operation has been frequently performed in unhealthy maternity hospitals, and also frequently on cases that were beyond hope of recovery before the operation was commenced. He argues that it is unfair to blame the Cæsarean operation for fatal results when the conditions were so unfavourable that any operation would have gone wrong.

A CASE OF ACUTE SPONTANEOUS INVERSION OF THE UTERUS OCCURRING AFTER ABORTION DURING THE FIFTH MONTH OF PREGNANCY is recorded by Dr Scott of Philadelphia in the same journal for January. The details of the case are given with some minuteness, and are interesting as demonstrating that the inversion occurred from no injurious traction on the fundus through the cord or pressure upon it from above. The author explains the accident as essentially due to a peculiar condition of the placenta, which was about three-fourths of an inch in thickness and lined the whole of the interior of the uterus. This thick placenta must have filled the os in such a manner as to increase its diameter about 1½ inches more than was necessary to permit the escape of the head. This dilatation, conjoined with weakness and flaccidity of the uterine tissues, together with the vis-a-tergo effected by the action of the abdominal muscles, appeared to the author to be the efficient causes of the inversion. Records of several interesting cases of spontaneous inversion occurring prior to period of viability of the fœtus are also included in the paper.

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## MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

HYDROBROMIC ETHER AS AN ANÆSTHETIC.—The experiments of Rabuteau on the lower animals to demonstrate the anæsthetic properties of hydrobromic ether have, says the *Boston Medical and Surgical Journal*, led Dr Turnbull of Philadelphia to employ it on the human subject. His successful results have induced others to make use of the substance, and Dr Lewis has used it for large operations at the Pennsylvania Hospital with gratifying success. Four cases are recorded, viz., amputation of the forearm at the upper third; perineal section for stricture of urethra; resection of stump after former amputation of the arm; and in a case of fracture of both legs, where it was administered in order that a careful examination might be made and tenotomy be performed. The after-effects of the inhalation are less severe than those following the use of chloroform, and the return to consciousness very much more rapid. Though its claims to be admitted into general use are said to be strong, it is admitted that it needs more careful observation to establish it firmly as a safe anæsthetic in general surgery.—*Medical Press and Circular,* 14th January 1880.

ON ALCOHOLIC VASCULAR TENSION AND ITS EFFECTS.—Persistent excess in the use of alcohol by a healthy person maintains a condition of extra pressure and strain on the small vessels, which at last finds relief in a hæmorrhage. If the patient be somewhat on in years, and have weak degenerative vessels, then a condition of tightness and over-pressure is most dangerous. How often do we have to see a robust-looking man suddenly struck down by cerebral hæmorrhage. Probably he has had a good dinner and drunk liberally, and when the doctor arrives and finds the poor man senseless on the sofa, every one says that he had been congratulated only the day before, and told how well he was looking. Supposing the vascular tension induced by a too free use of alcohol does not at once issue in a bleeding, it appears to maintain a constant strain on the heart and vessels which seriously impairs the nutrition of the structure, so that the weak and wasted coats of the bloodvessels become very prone to laceration and rupture—a condition well expressed by the popular term, "rotten from drink." Thus cirrhosis of the liver and granular disease of the kidney may be set going. The variability in the degree of blood-pressure, according as the patient is or is not under alcoholic influence, produces a singular irritability of the nervous system. Sleepless nights with palpitating heart, morning retching and coughing, and utter want of appetite for breakfast, are among a few of these effects. Want of decision on momentous points, impatience and recklessness, tinglings, numbness, and shooting pains, are other signs of disturbed innervation. The sudden withdrawal of all stimulus from these persons who have been living in a perpetual state of excessive tension and strain is followed by more or less collapse and sense of exhaustion and sinking, driving a few weak ones back to the drink as being their only safeguard from doing something dreadful. The best advice to give during this very painful and trying crisis is to encourage the patient to outlive it, by assuring him that it is but temporary, and to take care that he is well supplied with the best of nourishment, and with good fresh coffee when he feels especially down and low, while at the same time he takes a bitter tonic medicine; and, under this regimen and a fair amount of resolution on his own part, there comes in time a renewal of life and a restoration of nerve that is most satisfactory to witness. (By John C. Thorowgood, M.D., F.R.C.P.). —*Medical Press and Circular*, 21st January 1880.

HYDROFLUORIC ACID INHALATIONS IN DIPHTHERIA.—Henri Bergeron has read a paper before the Société de Médicine on the above method of treating diphtheria. He has tried it in twenty-four cases, out of which seventeen were severe, and he has had five deaths, four of these being infants. The dose he has found suitable is one grain for each cubic meter which the apartment contains, evaporated in the space of three hours. He claims (1.) That the inhalations thus given have never produced injurious results; (2.) All who had been submitted to this treatment for forty-eight hours were cured; (3.) The false membranes do not persist beyond the fifth day; (4.) In no case has he observed paralysis supervene in the soft palate or elsewhere. No case of contagion has occurred among the attendants or the household.—*Medical and Surgical Reporter*, 3d January 1880.

RHUS TOXICODENDRON.—Dr John A. Henning (*Cincinnati Lancet*) calls attention to the value of the above-named drug. It admirably meets certain indications. Thus it removes the dull, heavy, aching pain above the eyes in cases of catarrh. It speedily modifies the burning pain of erysipelas. Combined with gelseminum it increases its power to reduce temperature. In forms of inflammation accompanied by a burning, stinging pain it quickly removes the pain. In spinal irritation, with enfeebled circulation or spinal anæmia, it is an excellent remedy combined with nux vomica. It is also indicated in passive congestion of the brain or in meningitis. Its general action, when taken in proper doses, is as a laxative, diaphoretic, diuretic, and particularly as a stimulant of the nervous system. The dose is from five to fifteen minims in half an ounce of water.—*The Detroit Lancet*, January 1880.

TREATMENT OF URÆMIA BY INJECTIONS OF PILOCARPIN. — M. Leven read before the Biological Society of Paris, at its meeting on the 12th of October, an account of a girl, aged 16, who suffered from albuminuria, and who was suddenly seized with convulsions accompanied by complete anuria. Hydrochlorate of pilocarpin was injected subcutaneously, the third injection alone appearing to have any effect. The patient, who had previously been comatose, was then capable of being roused, and she perspired freely, whilst saliva was profusely excreted. The convulsions entirely ceased after the fourth injection, and the patient was cured. During the whole time of the uræmic symptoms the temperature oscillated between 37° and 38° C., whilst the saliva contained nearly ten per cent. of albumen. (*Le Progrès Médical*, 25th October 1879). —*The Practitioner*, February 1880).

TANNATE OF PELLETIERIN AS A TÆNIAFUGE.—The active principle of the bark of the *Punica granatum*, discovered by M. Tauret, and described by him under the name of pelletierin, has been used with success as a remedy for tænia. It is given in the form of tannate, in doses of 50 centigrams, followed in two hours by 30 grams of castor-oil. Dr Laudrien describes its action as follows:—In the two cases observed neither colic nor headache were occasioned. In the first the patient had been prepared by dieting, and a single dose sufficed to expel the tænia entire. In the second, though one dose did not suffice, the patient was not weakened by the treatment. The patient did not exhibit that repugnance so constantly shown to the administration of kousso or pomegranate bark. In a third case the administration of a dose of the hydrochlorate of pelletierin brought away 15 mètres of worm, the only phenomena observed being diplopia and a slight tendency to syncope, both of which soon passed off. The pulse and temperature were not influenced by this medicine; nor were the kidneys in any way affected. The medicine seemed to have an elective and toxic action operating solely on the tænia. (*Jour. de Méd. de Bordeaux*, 18th June 1879; *The New York Med. Record*, 6th Sept. 1879).—*The Practitioner*, February 1880.

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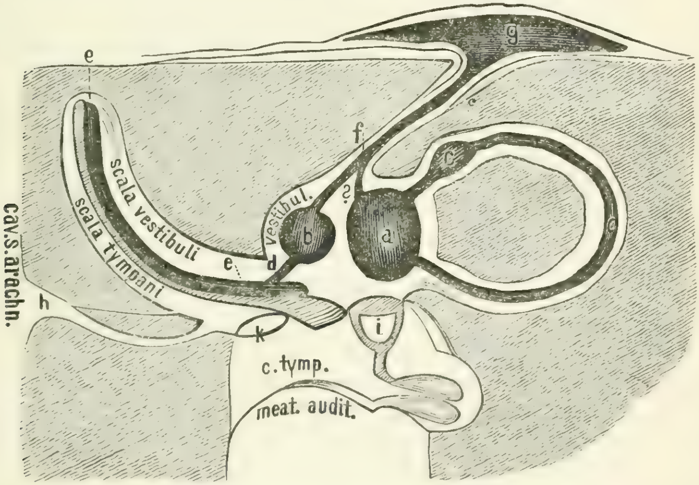
## PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

COMMUNICATION BETWEEN THE ENDO- AND PERI-LYMPHATIC CAVITIES OF THE LABYRINTH AND EXTRA-LABYRINTHINE INTRA-CRANIAL CAVITIES.—Weber-Liel: *Virchow's Archiv*, Bd. 77, 1879.—The uncertainty existing in regard to the communications of the two aqueducts of the labyrinth led Weber-Liel to attempt the solution of the question by what he calls the method by aspiration, as well as the old method by injection, and he seems to have met with perfect success in demonstrating that the aquæductus vestibuli is an endo-lymphatic passage in direct and free communication with a sac lying beneath the dura mater on the posterior aspect of the petrous bone, and that the aquæductus cochleæ is a peri-lymphatic passage in free communication with the arachnoid cavity. The sac on the posterior aspect of the petrous bone, saccus intra-duralis or endo-lymphaticus, is of connective tissue, and enclosed in the tissue of the dura mater; it is from 12 to 18 mm. long and from 5 to 9 mm. broad in its normal condition, but is much diminished by pathological changes in the tissues of the dura mater. In sixty preparations it was found in every one, and may be regarded, therefore, as normal. On opening it the interior was lined with flat epithelium, but the question of whether it is in reality a serous sac remains to be settled. From this sac a membranous tube leads directly to the vestibule. To demonstrate that this tube communicated with the endo-lymphatic cavities of the labyrinth, Weber-Liel opened the membranous superior semicircular canal, attached a glass tube to it, and connected this with an aspirator. The saccus intra-duralis was now laid open and filled with "Beale's blue," and suction exerted by the aspirator. The different steps of the operation, with the necessary cautions, are given in full. It was found that by this method both the sacculus of the labyrinth, all the membranous canals, and the ductus cochlearis, were filled with the colouring matter. The very free communication between the saccus intra-duralis and the endo-lymphatic cavities is also shown by the simple experiment of opening the superior semicircular canal so that the endo-lymph is exposed to view, and then pressing or using suction upon the sac, when the endo-lymph will be forced up through the opening in the canal or drawn back out of sight, showing both that the communication is very free, and also that during life any pressure or relaxation in the walls of the sac would influence the tension of the labyrinth itself. On the edges of this sac runs the vena aquæductus vestibuli, and the walls of the sac are surrounded by a network of vessels. To determine the connexion of the peri-lymphatic cavities of the labyrinth two methods were used—injection into the arachnoid cavity, and aspiration from that cavity. By the former method the injected fluid entered the scala tympani of the cochlea, and also exuded through the perforated membrane of the fenestra rotunda; but as some of the fluid escaped between the dura and pia mater, it was uncertain whether it had entered the cochlea from the arachnoid cavity, and aspiration was then used, as in the previous experiments. The whole anterior part of the preparation was immersed in the colouring matter, and suction on the opened semicircular canal exerted, with the result of depositing the colouring matter throughout the peri-lymphatic spaces of the labyrinth, but without colouring the porus acusticus internus, thus proving that the connexion could not be that canal. The same experiment was tried by first filling the entrance of the aquæductus cochlea with the blue, and here also the peri-lymphatic spaces only were filled with the colouring matter. The freedom of the communication through the cochlear aqueduct was also shown by filling its orifice with fluid, and then, by condensing and rarefying the air of the meatus, this fluid could be drawn inward or pressed outward. These experiments of Weber-Liel show, then, that the aquæductus vestibuli is a passage communicating and retaining the equilibrium between the endolymphatic cavities of the labyrinth and a sac situated within the dura mater, while the aquæductus cochlea is a passage communicating and retaining the equilibrium between the peri-lymphatic cavities of the labyrinth and the sub-arachnoid cavity. The peculiar sense of pressure in the head (*Eingenommenheit*) experienced with many affections of the ear he would, in some cases, explain by the assumption that the labyrinthine fluids are forced by pressure through these passages into the cranial cavity, and thus exert pressure upon the brain ; and the aural symptoms accompanying some diseases within the cranium he would explain in the opposite way, these passages allowing the fluid to be forced from the arachnoid cavity into the labyrinth. The whole series of experiments and their results are extremely interesting.



**Sketch of the Labyrinth, with the Endo- and Peri-lymphatic Spaces.**

*a* and *b*, Utriculus and sacculus in the vestibule; *c*, A membranous semicircular canal, with ampulla; *d*, Canalis reuniens; *e*, Ductus cochlearis; *f*, Aquæductus vestibule, with membranous duct communicating with *g*, Saccus intraduralis (endo-lymphaticus); *h*, Aquæductus cochleæ, with the canal for vein at its side; *i*, Foramen ovale, with stapes; *k*, Membrane of the foramen rotundum (membrana tympani secundaria). See also, in reference to this diagram, "The Aquæductus Cochleæ in Man," in *Edinburgh Medical Journal* for Dec. 1879, Periscope of Otology, p. 566.

ON THE SENSIBILITY OF THE ORGAN OF HEARING.—W. Kohlrausch: Wiedemann's *Annalen*, 1879, No. 6 ; *Phil. Mag.*, No. 48, September.—With the aid of a toothed wheel working against a disk of metal or pasteboard, Savart found that two impulses can make upon the ear the impression of a comparable tone. Exner (Pfluger's *Archiv*, xiii. p. 228), by means of tuning-forks vibrating before spherical resonators, finds that seventeen impulses—Pfaundler (*Wiener Berichte*, lxxvi. p. 572, 1877), by experiments on holed sirens and reflection-tones, that only two impulses—and

Auerbach (Wiedmann's *Annalen,* vi. p. 591, 1879), that about twenty vibrations, are necessary for the production of a tone in the physiological sense, the tone being determined to within the interval 100: 101. Less sharply defined tones can be produced in a simple manner by but two impulses. Two fingers of the hand being held together so that the ends of the finger-nails are on a level, a blow is given therewith somewhat obliquely upon a table or board, the proper tone of which is deadened by loading it with books or some other heavy substances. It will be readily felt that the two fingers rarely strike simultaneously, and by a little attention there will be heard, with the noise of the blow, a very hollow tone of a pitch, which changes *per saltum* according to the position of the fingers, but which, by practice, can be approximately had at command. Similar tones are obtained by running the finger-nail over short lengths of ribbed paper.

A CURIOUS ACOUSTIC ILLUSION.—*Telegraphic Journal,* London, September 15, 1879.—This illusion, pointed out by M. Plumaudon, of the Puy de Dôme Observatory, has also been observed by others who have made use of a pair of telephones in receiving messages or in experimental research. With a single telephone held, say, to the right ear, the transmitted voice appears to come from a distance to the right; while with a telephone held to the left ear it seems to arrive from the left of the listener. With a telephone to each ear, if one ear be less sensitive than the other, or if the telephone be held farther from that ear, the voice apparently shifts to the side of the other ear; and if both ears hear alike and both instruments are equally near their respective ears, the voice apparently proceeds from in front of the observer.

ON THE CHORDA TYMPANI NERVE.—Horatio R. Bigelow: *Archives of Medicine,* June 1879.—The author presents the result of an anatomical and physiological investigation of the chorda tympani nerve in rabbits and dogs, instituted during the spring and summer of 1875. He is led to take issue with the views entertained by Professor Sappey (*Traite d'Anatomie descriptive*) respecting the course and function of this nerve. He says, "To me there seems to be no doubt that the special sensory function of the facial filaments is derived from the nerve-cells in the intumescentia gangliformis found upon the nerve of Wrisberg in the aquæductus Fallopii. The chorda tympani sends branches to the lingual just after becoming joined to it in the common sheath between the pterygoid muscles. It is so well-nigh impossible to separate these connecting filaments, and so closely opposed to each other are the two trunks, that I am perfectly aware of the unsatisfactory nature of the dissections; but yet, by means of the glass, I was able to identify so many branches of the chorda tympani passing to the lingual, and so satisfactorily, for a considerable distance, demonstrated the integrity of each nerve, that I feel convinced that at no very distant day it will be proven conclusively that these nerves are not joined fibril to fibril, but that they pass together in one sheath, the lingual receiving branches from the chorda tympani, which, in turn, is made sensory through *the ganglion upon the nerve of Wrisberg*."—*American Journal of Otology*, vol. ii., No. 1.

## PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

Experiments on the Inoculation of the Cornea, Iris, and Conjunctiva with Tubercle.—Hænsell (Græfe's *Archiv*, xxv. 4, p. 1) has studied the changes produced in the cornea, iris, and conjunctiva of rabbits and guinea-pigs by inoculation with the fresh pus from tuberculous joints. This substance, injected into the anterior chamber in an aseptic condition, becomes absorbed in the course of a week. Then, after a period of incubation lasting twenty to thirty days, sudden swelling and hyperæmia of the iris, accompanied by ciliary injection, set in, soon after which small gray points can be seen, which after some time become confluent, press upon, bulge forward, and eventually perforate the cornea, and finally undergo caseous degeneration. The whole process described takes three months in rabbits, in guinea-pigs only about half that time. Inoculation of the cornea directly by interstitial injection of the same pus produces, after fifteen to twenty-three days, severe ulceration with excessive development of bloodvessels, the whole being not unlike a pannus crassus as it occurs in man. Similar results as those which follow injection into the anterior chamber are obtained when the conjunctiva is selected for inoculation. In order to test whether the tubercles formed in the iris and conjunctiva possessed the same power of producing a general tuberculosis as other tubercular substances, they were introduced in two cases into the abdominal cavity, and in these the post-mortem examination, after three months, showed a miliary tuberculosis of all the internal organs. Hænsell has found, with Cohnheim, that any other substance introduced into the anterior chamber is incapable of producing the same effect; on the other hand, it was always found possible to infect one animal from the artificially produced iris tubercles of another. In all cases of tubercle of the iris which have been observed in man the same course of events has been noted as in the inoculated tubercle of these animals, only the time taken for complete development is longer. Hænsell considers that the fact of there being a definite period of incubation, as well as that the organisms which Klebs looks upon as being the principal agents in the production of tubercle are constantly found in these neoplasms of the iris, shows that they constitute a truly zymotic disease.

On the Disturbances of Vision caused by Injuries to the Skull.—Dr Berlin has collected a number of cases which have come under the observation of himself and others, in which amaurosis has followed severe blows on the head. In an interesting paper, read before the Ophthalmological Society at Heidelberg, he has given his views on this subject. These may briefly be summed up as follows:—The amaurosis is in by far the greatest number of cases unilateral; it arises suddenly at the time of, or immediately after the injury, and is generally complete and incurable. The injuries giving rise to the amaurosis are almost always severe, such, indeed, as generally give rise to loss of consciousness at the time, and may often be supposed to have caused fracture. The frequency of fracture of the roof of the orbit is very great, as may be seen from the statistics of Hólder. Of 126 cases of fracture of the base of the skull examined by him, 88 involved the base, in 80, or 90 per cent., of which the roof of the skull was fractured. In 54, or 60 per cent., the line of fracture passed through the walls of the foramen opticum, and this independent of the direction of the force producing the fracture. In the 54 fractures of the optic foramen Hólder found extravasation of blood into the sheath of the optic nerve 42 times. No extravasation into the sheath of the nerve was found in any case when the fracture did not involve the foramen. Taking into consideration, then, the severe nature of the injuries causing amaurosis, and the statistics of Hólder, Berlin is of opinion that the amaurosis in such cases is generally the result of injury to the optic nerve from fracture through the foramen.

Removal of a Foreign Body from the Vitreous Chamber by means of a Magnet.—Hirschberg removed successfully a piece of iron 3 mm. long and 2 mm. broad from the vitreous chamber with an electro-magnet which he had constructed for the purpose. An incision was made in the sclerotic near where the foreign body was seen with the ophthalmoscope to lie. The magnet used can attract pieces of iron of 1 to 5 mm. in length from a distance of 2 to 4 mm. when placed free in vitreous humour. He concludes his account of the case with the following remarks on this method of operating:—“The asserted possibility of removing with a magnet a piece of iron embedded in the cornea, as we see them daily in iron-workers, and which are so easily removed by mechanical means, must be looked upon as a fable, a counterpart to the tale in the *Arabian Nights*, of the magnetic island which attracted the nails from the planks of passing ships. For foreign bodies in the anterior chamber, the magnet is, as a rule, superfluous and impractical; as soon as the aqueous humour escapes, and the piece of iron is pressed up against the posterior surface of the cornea, it can easily be extracted with forceps, whilst extraction with a magnet is exceedingly difficult, as will be found by experimenting on rabbits. The triumphant cases for the magnet are only those in which, as in our case, the piece of iron has recently found its way into the eye and lies free in the vitreous; in such cases it could only rarely be extracted with forceps or scoop without producing lasting injury to the eye."—*Centralblatt f. Augenh.*, December 1879.

A RARE FORM OF OPACITY OF THE CORNEA.—In this paper (Knapp's *Archiv*, ix. 2, p. 184) Dr Nettleship gives an excellent description of a transverse opacity, which occurs rarely and under circumstances still imperfectly understood, in the cornea of old people. The description given differs slightly from that given by Græfe in one of his well-known papers on glaucoma. Whereas Græfe seems always to have observed the opacity begin in two separate portions at the inner and outer margins of that part of the cornea which is uncovered by the lids, and gradually extend until they met over the centre of the pupil, Nettleship has seen the process begin as frequently in the centre, and is of opinion that the margins of the cornea always remain free. Further, Græfe has associated these cases constantly, sooner or later, with secondary glaucoma, whilst Nettleship believes that they are sometimes primary, uncomplicated corneal changes. A number of valuable suggestions are thrown out as to the possible etiology of this curious condition. These are preceded by a careful examination of all the causes which might be supposed to influence its occurrence in any way. The opinion of the author seems to be that some constitutional or trophic conditions favour the gradual alteration in the most exposed part of the cornea, where the opacity is invariably situated. The treatment advocated and adopted with success is the scraping away of the opacity from the centre of the pupil. A recurrence after this operation does not appear to take place. It will be remembered that V. Græfe recommended iridectomy.

CONGENITAL NUCLEAR CATARACT.—Alfred Græfe called attention, at the Ophthalmological Congress at Heidelberg, to a form of nuclear cataract of very firm consistence, which is found in infants, but which, although probably not unfrequently met with, has, in his opinion, not received sufficient notice in the literature of cataract. It is, however, of importance with reference to the proper means to be adopted for its removal. On attempting to needle this form of cataract its density becomes evident from the movement imparted to the lens. The result of the discision is also unsatisfactory, imbibition and absorption taking place only imperfectly. The general opinion of those members who took part in the discussion following the paper was that extraction is the proper method of treating such cases, and that this operation can safely be performed on very young children. In the January number of the *Centralblatt f. Augenheilkunde* Dr Just publishes seven successful cases of extraction in infants, in which cases the cataract was of hard consistence. No bandage was used after the operation. He believes that this form of cataract is not congenital, but begins very shortly after birth. This opinion seems, however, to be based entirely on the statements of the mothers.

ANTISEPTICS IN OPHTHALMIC SURGERY.—Galezowski (*Recueil d'Ophthalmologie,* November 1879) recommends antiseptic precautions for most operations on the eye, principally, however, in enucleation, operations on the lids, etc., and cataract extraction. All the instruments used, as well as the sutures and sponges, should be dipped in a solution of carbolic acid, 1 to 1000 (!), and the wound, as well as the skin round about, washed with the same solution. More concentrated solutions may be used in the case of enucleation, and the compresses must also be carbolized, etc. Galezowski also uses other antiseptic applications, such as boracic acid and vaseline, 1 to 100, in abscess of the cornea, also a 1 per cent. solution of boracic acid for the purification of instruments to be used in cataract operations. Galezowski has had most excellent results since he has begun his antiseptics. It is difficult to see how failures could occur at all with such precautions. (!) This subject was also discussed at the Amsterdam Congress, where it was introduced by Snellen, who uses a 1 per cent. solution of carbolic acid. He finds a spray impracticable, and has used instead, with great success, a current of air purified by being caused to pass through carbolic acid. As a dressing he uses linen saturated with vaseline, as he finds that the usual antiseptic dressings are too irritating, and cause an increased secretion from the conjunctiva and palpebral glands.

# Part Fifth.

## MEDICAL NEWS.

A DOCTOR'S USE OF THE CARRIER PIGEON.—These useful birds have been employed for some time by Dr Harvey I. Philpot as "unqualified assistants," or apothecaries' messengers. While out on practice Dr Harvey takes half-a-dozen birds along with him on his rounds in a small basket, and, after seeing a patient, ties the prescription round the neck of one of them and liberates him, when he flies straight home to the surgery, where the medicine is prepared and sent to the patient without loss of time. Should any patient be very ill, and an early report of his condition be desired by the physician, a bird is left with him to bring the latter tidings.—*Cassell's Family Magazine,* January 1880.

# OBITUARY.

ALEXANDER THOM, ÆT. 41.—Edinburgh men who were students twenty years ago, and of whom many doubtless read the *Edinburgh Medical Journal*, will learn with deep regret of the death of Dr Thom of Brampton. Born and reared in Edinburgh, surrounded by friends many of whom were of culture and accomplishment, he no doubt early developed those habits of earnest thought and close, careful reading which characterized his life. He began his professional career as an assistant in East Lothian, passed from that to Durham, and ultimately came to Brampton, where he has been associated with Dr Armstrong for nearly twenty years. His quiet and retiring manner prevented in a measure his mental ability and wide culture being generally known ; but to those who were his friends—and no one who knew him but became so—he was an object of the most sincere respect and the warmest love. His repute as a practitioner fell in no wise short of what he so well deserved, and few men will in their sphere be more sadly missed and more deeply mourned than Alexander Thom. Warm-hearted, kind, and most unselfish, his professional services were given to all unsparingly and ungrudgingly, but the poor will miss him most. To many of his patients his loss is well-nigh irreparable, and to some of his fellow-workers it seems as if no little of the sunlight in their own lives had gone down with him. His life, like that of a Gideon Gray generally, has been one of hard and incessant toil, the saddest thought in connexion with which is, that it has brought all too prematurely to a close the career of one who was a trusted and able doctor and a most estimable and kind friend. In the old cemetery at Brampton, in the midst of what to him was once a scene of pleasant and most useful labour, and which is now for his sake to very many truly hallowed ground, " after life's fitful fever he sleeps well. "

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## THE LATE DR WILSON OF INVERNESS.

THE north of Scotland has lost one of its best and most estimable medical practitioners by the death of Dr Wilson. He had come to Edinburgh, partly to enjoy a little relaxation from work, and partly to consult metropolitan physicians as to two of his patients. On Monday, 16th February, he, along with Mrs Wilson and two other ladies, under the guidance of his friend Professor Maclagan, went through the Royal Infirmary ; he was delighted with the spacious wards and the whole arrangements of the hospital, and was then in apparent good health and excellent spirits. That night about 10 o'clock he was seized with left hemiplegia ; at first he was quite conscious and aware of the nature of his attack, speaking of it to Drs Peddie and Maclagan, who were in attendance on him. Rapidly, however, he sank into profound coma and died, evidently from copious cerebral hæmorrhage, at 4 A.M. of the 17th. His sudden death produced a profound impression on the officials of the Infirmary who had seen him there on the previous day, and has been a source of deep grief to the inhabitants of Inverness, by whom he was universally respected and beloved. We cannot better show the estimate in which he was held in Inverness, than by quoting the following from an Inverness newspaper.—"It is hard to realize this sudden removal of a conspicuous citizen, who spent among us forty of his career of only sixty years. Dr Wilson was a son of the late Provost Wilson, of Nairn, and took his degree of A.M. at Aberdeen. He graduated M.D. at Edinburgh in 1842, and in 1866 was made F.R.C.S. Immediately after graduating he was appointed house surgeon of the Northern Infirmary at Inverness; and after entering into private practice he was appointed one of the honorary consulting physicians; month after month, for over thirty years, earnestly and assiduously aiding with his skill and experience the resident medical attendant. In September 1849 Dr Nicoll (to whom he had been apprentice and assistant) fell a victim to cholera in Inverness, and Dr Wilson had already made so favourable an impression that he succeeded in retaining the influential connexion which Dr Nicol had formed by years of industry and exceptional medical skill. Dr Wilson's career has been one of rare success and prosperity, and well he deserved both; for as a medical adviser he was singularly safe, sagacious, and attentive. Among every class his personal kindness, his gentle manner, extreme conscientiousness, and high professional skill were greatly esteemed, and the whole town of Inverness regards his death with the deepest sorrow. Notwithstanding his having a wide and extensive range of patients among the more opulent classes of society, Dr Wilson was ever ready to the call of duty from the very poorest. Wherever pain had to be relieved, there he was ever ready to go at any hour of day or night without fee or reward, and the excessive fatigue he thus underwent, in the course of an otherwise extensive practice, undermined his constitution. The overwrought system began to fail some ten years ago, and since then Dr Wilson was compelled somewhat to restrict the demands made upon him, but his sympathetic nature ever rebelled against a distinct refusal when no other professional aid was immediately at hand. Among the appointments he held were medical officer of the Inverness Prison, consulting physician to the Northern Counties District Asylum, and surgeon of the Inverness Artillery Volunteers."

We have a sad satisfaction in placing on record our regard for Dr Wilson, as a typical example of the able provincial practitioner, who was at once a genial companion, an affectionate friend, and an unostentatious, sincere Christian gentleman.—A. D. M.

# Part First.

## ORIGINAL COMMUNICATIONS.

### ARTICLE I.—*Basilysis: a Suggestion for Comminuting the Fœtal Head in Cases of Obstructed Labour.* By ALEXANDER RUSSELL SIMPSON, M.D., F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University of Edinburgh.

(*Communicated to the Edinburgh Obstetrical Society on 28th January* 1880.)

LITTLE more than twenty years have passed since British obstetricians began to waken up to the consciousness that they were behind their Continental brethren in their manner of reducing the size of the fœtal head in cases of labour obstructed from contraction of the pelvis.

Since the days of Smellie little change had taken place in the method of carrying out the gruesome operation. Some mechanical improvements had been effected in the make of the instruments. Early in the forties[1] Sir James Simpson furnished the profession with a modification of Naegele's instrument, which left nothing to be desired for easily and effectively perforating the cranial vault. Davis, Lyon, Murphy, Zeigler, and others had contrived various forms of instruments for fracturing or cutting and removing the bones of the calvarium, so as to reduce the head to the utmost limit. But that was all. The general teaching and practice in regard to the whole procedure might have been summarized in a single sentence,—that after a sufficient opening had been made in the arch of the skull, and the flat bones had as far as possible been fractured and removed, what remained of the head must be dragged out by hook or by crook. The base of the skull—its hardest, most unyielding part—was left unaltered.

On the Continent in 1829 the younger Baudelocque had proposed the use of his cephalotribe for crushing the head in all its parts. His proposal met with a ready response, and speedily cephalotripsy superseded the older forms of craniotomy throughout both France and Germany. In Britain, however, alike in London, Edinburgh, and Dublin, the cephalotribe was regarded with disfavour, and the idea of its use was treated with something like disdain.

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[1] On consulting the Minute-Book of the Edinburgh Obstetrical Society, I find that he showed it at a meeting held on April 26, 1842.

Pupils of Sir James Simpson before the year 1858 may recollect how he would exhibit the bulky instrument of Baudelocque (see Fig. 1) and the still more cumbersome apparatus of Kilian (see Fig. 2); would tell how, in the only case in which he had tried to use it, the great machine had lost its hold; and would leave the impression on the class that the whole was a stupendous joke.

Churchill,[1] in his most popular of text-books on midwifery, even in his edition of 1866, concludes his remarks on the cephalotribe by saying, "It would require unusual hardihood to venture upon the latter instrument in private practice in this country."

Murphy,[2] coupling the cephalotribe with Davis's osteotomist, concludes that "the prima facie evidence seems against them;" and referring to a *cause célèbre* which he has detailed at length, he says, "Look at the cephalotribe, and ask yourselves, How could that instrument be used in Elizabeth Sherwood's case? To me it seems impossible."

Ramsbotham[3] dedicates the last edition of his great work to Sir James Simpson, on a leaf which has on the back of it a motto from one of the Baudelocques, but he gives no hint that he knew of the existence of such an instrument as the cephalotribe.

A survival of this strange indifference to the drawbacks of the old proceedings will be found in Professor Leishman's [4] text-book, which gravely devotes a large part of its space, even in the third edition, to the discussion of methods that might well have been buried a decade ago in the pages of obsolete text-books, and, after echoing Murphy's remark about Elizabeth Sherwood's case, discusses the construction of cephalotribes from a point of view purely theoretical.

When studying at various continental schools in 1857–58, I was greatly impressed with the almost universal use of the cephalotribe. Busch at Berlin, Braun at Vienna, Scanzoni at Würzburg, like their colleagues at other universities, might differ in their views as to the best form of cephalotribe, but none of them thought of reverting to the older craniotomy procedures.

Having come to the conclusion that the Scanzoni instrument was the best, I went to his instrument-maker in Würzburg to procure one. He did not happen to have any in stock; but Professor Scanzoni was good enough to allow me to take away the one

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[1] *On the Theory and Practice of Midwifery.* London, 1866.

[2] *Lectures on the Principles and Practice of Midwifery.* London, 1862.

[3] *Obstetric Medicine and Surgery.* London, 1867.

[4] *A System of Midwifery.* Glasgow, 1880.

(see Fig. 3) which he had had in his own possession for several years, and had employed in ten or a dozen cases. I brought it home to my uncle in July 1858, and he at once recognised that it was free from some of the drawbacks of the cephalotribes he had previously seen. In the following October he was called out during the night to a difficult case. He carried with him his usual armamentarium, in which the cephalotribe had not as yet found a place. The result is recorded in his *Clinical Lectures*.[1] After perforating the head in the usual way, and further comminuting it with a pair of Murphy's forceps, he left the case for some hours to the efforts of nature. When we went back to the patient in the morning, expecting to apply the cephalotribe, the head was found to have already passed through the brim, and the labour was terminated without any further crushing of the fœtal head. This case having led, as he has explained in his lectures, to the invention of cranioclasm and the cranioclast, his attention was for a few years diverted from the use of the cephalotribe, and his mind was disposed rather to dwell upon its drawbacks.

In 1861 he showed to this Society a head which had been left in the cavity of the uterus after the trunk had been cut from it, and which he succeeded in extracting with great comfort with Scanzoni's cephalotribe.[2] This made him feel that he had not yet fully appreciated the value of the instrument. Soon afterwards he satisfactorily delivered with it a woman with a contracted brim; and as I had further proved the value of the instrument in two similar cases—one in the practice of Dr Milne, the other in that of the late Dr Andrew Inglis—he set himself to the construction of a cephalotribe which might prove itself as serviceable as Scanzoni's, and which might at the same time, by its smaller bulk and more easy management, commend itself to British practitioners. Hence the instrument (see Fig. 4) which he exhibited to the Society in 1864, and with which the Fellows of this Society are sufficiently familiar.

In that or the following year I took it with me on a visit to Dublin, and showed the new instrument, among others, to Dr Kidd. In 1866 that distinguished obstetrician read a communication on the subject to the Dublin Obstetrical Society,[3] and made suggestions for modifying the form of the instrument. In October of the same year Dr Braxton Hicks called the attention of London obstetricians[4] to the value of the cephalotribe, and proposed the use of a very serviceable modification of the instrument to which Simpson had given a British cast. From this point the Simpson cephalotribe, either in its original form or as modified by Kidd or Braxton Hicks, has come into more and more general use among British practitioners.

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[1] *On Diseases of Women.* Edinburgh, 1872, p. 531.

[2] *Edinburgh Medical Journal*, viii. 282.

[3] The *Dublin Quarterly Journal of Medical Science*, February 1867.

[4] *Transactions of the Obstetrical Society of London*, viii. 275 : 1866.

Curiously enough, in the meantime, Simpson's cranioclast (see Fig. 5) had been finding its way into obstetrical practice in Germany. Professor Braun of Vienna, who is probably the most experienced, as he is certainly one of the ablest and most accomplished, of German obstetricians, recognising the importance of the new procedure, modified the instrument with which Simpson had proposed to effect it. He enlarged the cranioclast, increased the curve of the blades, and added a screw apparatus to the handles to secure the grasp (see Fig. 6). The results of his experience with the cranioclast were published by his assistant, Dr Carl Rokitansky.[1] These contrasted so favourably with the record of cases terminated with the cephalotribe that very soon in other German schools cephalotripsy began to be supplanted by cranioclasm. The controversy there is not yet at an end as regards their relative value. In the discussion at the Gynecological Congress at Munich in 1877, Crédé, Olshausen, Schwartz, etc., spoke in favour of the cephalotribe, whilst Spiegelberg, Müller, Winckel, etc., stood up for the cranioclast. The rapidity with which the cranioclast was received into general favour in Germany may be gathered from the circumstance, that in *Canstatt's Jahresbericht* for 1874[2] the reporter, in recording the title of a paper on a new form of cephalotribe, quietly says, "Ist erledigt, wie alle cephalotriben, durch C. Braun's cranioclasten." In one of the most discriminating papers on the subject, Professor Fritsch[3] concludes that the cranioclast is the most universally applicable of all the instruments for crushing and extracting the fœtal head.

My object, however, in the present communication is not to weigh the respective merits and demerits of cranioclasm and cephalotripsy, but to inquire whether there may not be another operative procedure which will supersede them both.

If we consider more closely the operation for lessening the fœtal head, it is best to divide it into the three stages of—I. Perforation; II. Comminution; III. Extraction.

## I. PERFORATION.

The opening in the presenting part of the calvarium may be effected by means of a trephine, straight or curved, such as is so commonly employed in Germany; or the perforator with a scissors or lance-head point may be employed, as with us. My experience with the trephine lets me understand why Schroeder says,[4] "To us the use of the scissors-shaped perforator seems in general to deserve the preference." In every case where I have used Sir James Simpson's perforator (see Fig. 7) I have easily succeeded in effecting as thorough a fracturing of the cranial vault as could be desired. In one case of not too contracted pelvis, where the fœtus was already some hours dead, after one or two fragments of bone had been lifted out of the margin of the large aperture, the head was found to be so collapsed as to allow of its being drawn through the pelvis by means of two fingers passed within the skull, while the action of the uterus was supplemented by the hands of an assistant pressing the fœtus from above. In the great run of cases, however, the diminution of the head is not sufficient to allow of its extraction through the canals, and it becomes necessary to have recourse to some kind of further

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[1] *Wiener Medicinische Presse*, Nos. 8–19. See *Canstatt's Jahresbericht*, 592: 1871.

[2] II., 812.

[3] *Der Kephalothryptor und Braun's Kranioklast*; *Volkmann's Sammlung*, No. 127: 1878.

[4] *Lehrbuch der Geburtshülfe*, 342.

## II. COMMINUTION.

Ever since I was called to the Chair of Midwifery in our University I have been in the habit of explaining to my students that there are five different methods by which the necessary diminution of the fœtal head may be attempted, which are represented by the five expressions—1, Craniotomy; 2, Cranioclasm; 3, Cephalotripsy; 4, Cephalotomy; 5, Transforation.

1. *Craniotomy.*—The older craniotomy procedures and apparatus could be very summarily dealt with. It was enough to demonstrate some of the hooks, crotchets, and forceps, and to indicate the rules for their employment drawn up by Sir James Simpson thirty or forty years ago. In a large class of students it is always possible that there might be one or two who would begin their professional career as assistants to practitioners who had not seen the need of furnishing themselves with more efficient implements. But the time is near when the whole category of them, with rare exceptions, will be laid to rest, perhaps to rust, in our obstetrical museums. For, if I may borrow a comparison from the rather too popular game of war, the crotchet, when compared with the cephalotribe or cranioclast, has about the same relative value for the purpose of saving the lives of poor women in labour as the old Brown Bess has, when compared with the Snider or Martini-Henry rifle, for killing their husbands in battle.

2 and 3. *Cranioclasm and Cephalotripsy.*—I confess I have not been able to come to a definite decision as to the relative value of the cephalotribe and the cranioclast. The inevitable elongation of the head in a direction opposed to that in which it is compressed by the blades always seems to me a serious drawback to the value of the cephalotribe. The extraction of the head in accordance with a scientific idea of the mechanism seems in such a condition next to impossible. Hence I have been inclined always first to try the cranioclast, but have found that when the head was still very movable above the brim the cephalotribe took hold and crushed it in a case where it was more difficult to get a satisfactory grasp

with the cranioclast. At the same time, I believe the obstetricians are right who hold that the cranioclast is applicable, and may be successfully employed, in extracting the head through a pelvis too contracted to admit of the use of the cephalotribe. And I am sure that wherever the head has in the least become fixed at the brim, the cranioclast, which first fractures some of the basal bones, afterwards, during extraction, favours the natural mechanism and moulding of the head. As Wiener[1] hints, some of the failures that have been experienced in the use of the cranioclast have risen from the operator not having clearly apprehended the principle of its action and closely followed Sir James Simpson's instructions for its employment. The adaptation of a screw apparatus, such as has been applied to it by Braun and Barnes, will doubtlessly make it more efficient both as a compressor and tractor; but in the employment of it I have always felt as if I had got a sufficient compression and traction power with a wet towel twisted firmly round the handles. It is important, in applying the soft towel or napkin, to fix a damp corner of it by a single turn round one of the handles, when the next turn, which passes round the other handle, gives as full a purchase for compression as could be desired. But whatever might be the relative advantages or disadvantages of the cephalotribe and the cranioclast, experience and science alike rendered it necessary to explain fully their construction and the principles of their application and working as the instruments by which, in the great proportion of impracticable labours, obstetricians could best accomplish the delivery.

4. *Cephalotomy.*—Of the different methods of cutting the head in pieces I could only indicate, 1*st*, that Belgian accoucheurs, following the lead of Van Huevel, had made frequent use of the *Forceps-scie*, by which the head is sawn through from below upwards, and had reported results more favourable than those derived from the cephalotribe. But the instrument is very expensive, and has hardly met with any favourable regard out of Belgium. Then, 2*d*, Dr Barnes has proposed to reduce the head by passing round it the loop of a wire *Ecraseur*, and so cutting it through from above. But my impression regarding this suggestion has been, that in cases where it would be possible to apply a wire round the head of the child it would be easier to reduce it with cephalotribe or cranioclast. The same remarks apply to the analogous *Diviseur cephalique* of Joulin.[2] 3*d*, The *Labitom* of Von Ritgen, which has a sort of a knife fitted on the cavity of each blade of a pair of forceps, for the purpose of cutting the fœtal head from either side, is an utterly unpractical instrument; and although I brought a specimen home with me along with Scanzoni's cephalotribe, it was rather as an obstetrical curiosity than with any idea that it could

[1] *Archiv für Gynækologie*, xi. 413 : 1877 ; reproduced in the *American Journal of Obstetrics*, xi. 184 : 1878.

[2] *Traité d'Accouchments*, p. 1080.

ever be used in practice, and also because it has a joint of quite peculiar character.

5. *Transforation.*—There remained the fifth method of operating, which seeks to effect the diminution of the head by drilling holes in the basis cranii, or, as Gueniot[1] expresses it, "sapping the sphenoid." It has always seemed to me that it is in this direction we must proceed to arrive at the ideal method of head-comminution.

Scientific midwifery demands a dissolution of the bones at the cranial base: can obstetric art accomplish it?

Soon after Sir James Simpson proposed to attack the base by means of the cranioclast, one blade of which was to be passed within, the other outside, the perforated cranium, Professor Hubert of Louvain suggested to the Belgian Academy of Medicine that the base should be broken up from within. The essential character of his operation may be gathered from the designation which he proposed to apply to it, of Sphenotresia. I was acquainted with the history and nature of the instruments which he invented for the purpose, and the rules for their employment, from his work on midwifery, which appeared in 1869.[2] I was impressed with his startlingly favourable statistical results, but was detained from inquiring farther into the merits of the operation by the rather complicated nature of the procedure and of the instruments by which it was to be carried out. Perhaps, in regard to the latter point, I formed too hasty a judgment, and I think that I was all the more led to this conclusion from seeing the costly and cumbrous character of the apparatus of M. Guyon.

For in 1867 M. Guyon had conceived independently the idea of effecting the dissolution of the basis cranii by a process which he described as intra-cranial cephalotripsy, and had successfully put it in practice at the Hôtel Dieu in the end of the following year. A case containing his apparatus I found in the collection of the late Sir James Simpson, now in my possession. They consist (see Fig. 8) of a long rod or stilette, A, D, with cork-screw point, A, A, which is first fixed in the centre of the most accessible presenting part of the skull of the child. Its movable handle, D, has then to be removed, and the larger of two trephines, *c*, having been slipped over it, the handle is readjusted to steady the disc which is removed by the crown of the trephine. Through the large opening thus produced in the vertex the finger is passed to explore the base of the skull and to guide the stilette to the sphenoid bone, which in its turn is transfixed. The smaller trephine, C, is now slipped over the stilette, and worked so as to saw a disc out of the solid base. In this way the base may be drilled at two or more points. The head is now seized in the grasp of a pair of forceps, B, with blades as narrow and flat as those of the cephalotribe, but of slighter construction. The handles are very long, so as to give a leverage for compression, and are kept closed after application and compression by a spring ratchet. Clearly it was not an apparatus which one could advise a young graduate to add to his obstetric equipment; and I regret that it did not even occur to myself to make trial of it until lately. The patient in whom I used it is a small, slenderly-built woman, with a universally and unequally contracted pelvis, having an external conjugate or Baudelocque diameter of 5½ inches, and an internal conjugate diameter at the brim of 2¼ or 2½ inches, the latter being estimated not only from measurements of the diagonal conjugate through the vagina, but of the true conjugate through the abdominal walls. In a previous labour, when Dr Hart had tried to deliver her by turning, he had found it necessary to perforate the after-coming head, and only effected the extraction with great difficulty. On this occasion, when two holes had been drilled in the base with Guyon's perforator, and the head was compressed between the blades, I could hardly believe my senses when I felt the head coming through the brim with the exercise of a force of only some five or six lbs. Dr Hart, Dr Caird, and Dr Barbour, who were kindly assisting me, were equally astonished; and while Dr Caird was administering chloroform, the others had an opportunity of satisfying themselves that the head advanced under the uterine efforts, the instrument, which they each held in turn, merely serving to guide it through the parturient canals. It was in reality only used as a tractor when the shoulders had to be dragged through the narrow brim. The head of the child, a male, has been left in the grasp of the forceps, that the Fellows of the Society may see how completely it has collapsed under a single squeeze (see Figs. 9 and 10).

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[1] Article "Craniotomie" in the *Dictionnaire Encyclopédique des Sciences Medicales*, xxii. 608.

[2] *Cours d'Accouchements*, par le Dr L. J. Hubert Louvain, 1869.

In showing the preparation to the Society I have ventured to prefix this brief historical sketch, because it has led me up to the inquiry, Can we not produce an effective dissolution of the bones at the base of the skull by some contrivance less costly and cumbrous? I believe the question will be answered in the affirmative. I am convinced that it should always be attempted, and I anticipate that soon in all such cases it will be accomplished. Until some better instrument be proposed, I have to suggest the use of a terebrator (see Fig. 11) which bears more resemblance to Blot's perforator than to any other implement. A long steel rod, furnished with a wooden handle, terminates in a point which has a screwing surface of half an inch in length. At this distance from the point, a broad shoulder will prevent the point from passing farther through the structures it is piercing. Along one of its sides the rod is excavated to receive a branch, which is jointed to the main stem about four and a half inches from the shoulder. When the instrument is being screwed into the bones, this will be buried in

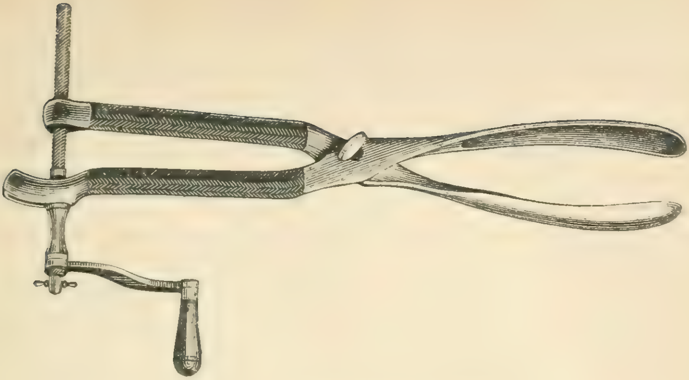

Fig. 1. Baudelocque's Cephalotribe

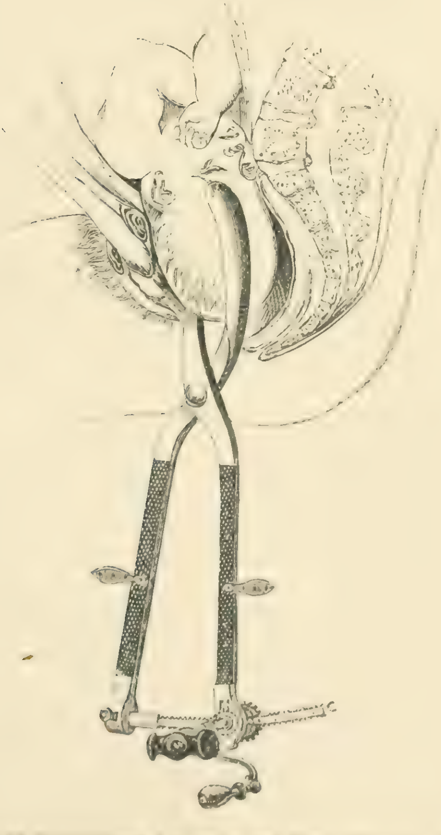

Fig. 2. Kilian's Cephalotribe applied to the Fœtal Head in a Pelvis contracted at the Brim.—(*Keith's Obstetric Atlas.*)

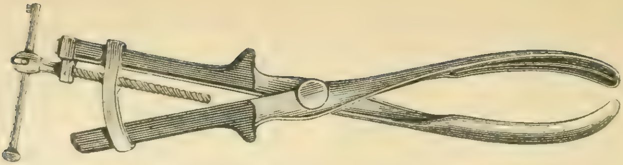

FIG. 3.—SCANZONI'S CEPHALOTRIBE.

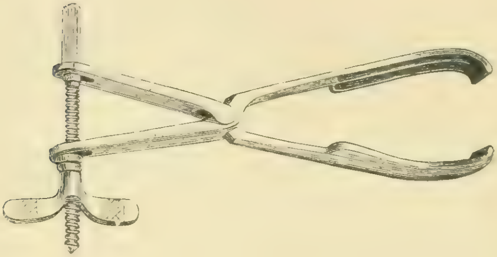

FIG. 4.—SIMPSON'S CEPHALOTRIBE.

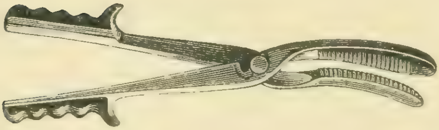

FIG. 5.—SIMPSON'S CRANIOCLAST.

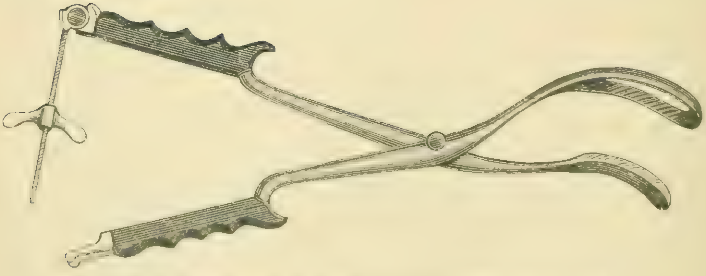

FIG. 6.—BRAUN'S CRANIOCLAST. (Figure relatively too large.)

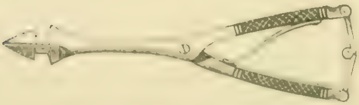

FIG. 7.—SIMPSON'S PERFORATOR.

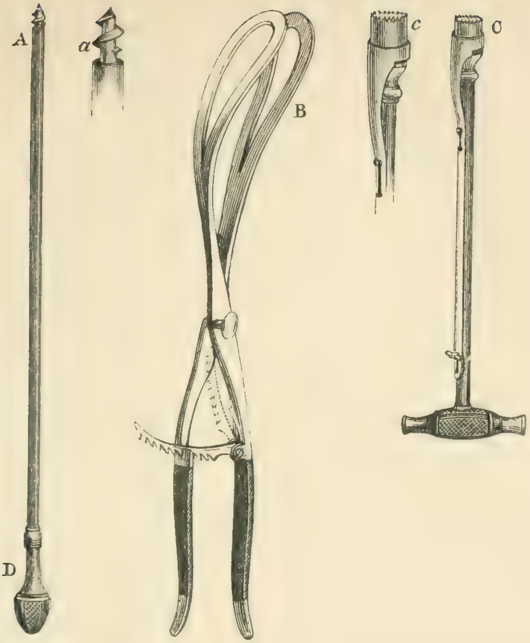

Fig. 8.—Guyon's Apparatus for Intra-cranial Cephalotripsy

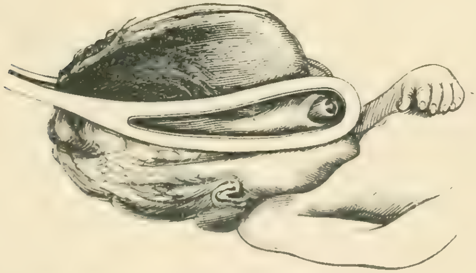

Fig. 9.—Side View of Head crushed by Guyon's Apparatus

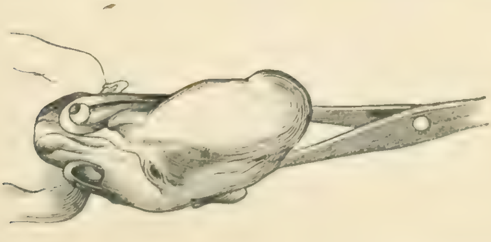

Fig. 10.—Front View of Head crushed by Guyon's Apparatus

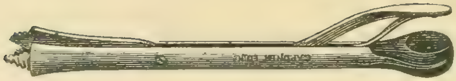

Fig. 11.—Proposed Basilyst. (Half opened.)

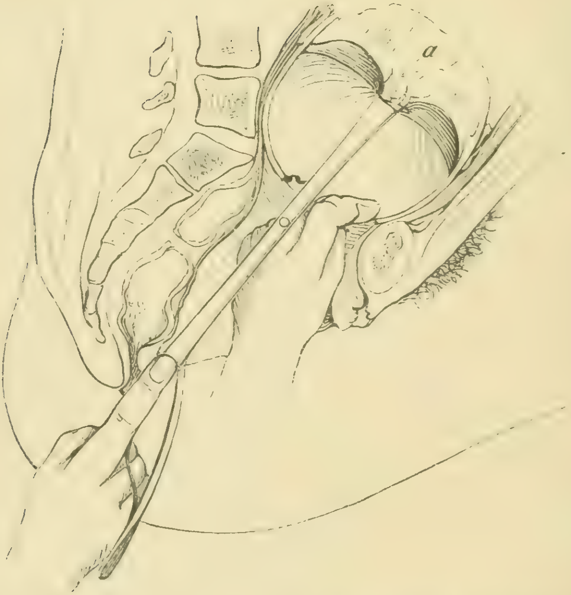

Fig. 12.—Section of Deformed Pelvis and Head of Fœtus, with Point of Basilyst entering *a*, Basis Cranii.

the rod, and enter with it. Pressure on its handle will then push it out, as the blade of a hysterotome is pushed from its sheath, and dilaceration of the cranial floor at the point of perforation must ensue. When the point is first being made to press into the base of the skull, the head may be steadied and fixed partly by pressure from above, but still more by traction from below, made either with the finger or a pair of forceps grasping the edge of the perforation which must, of course, first have been made in the vertex (see Fig. 12). That by such an instrument a very complete dissolution of the cranial base can be brought about, I have proved experimentally on the dead subject.

Howsoever the loosening and fracturing of this most resistant part of the fœtal head be effected, the statistical figures of M. Hubert[1] should encourage obstetricians to the effort to contrive a procedure and an instrument as simple and inexpensive as possible. Here is one of his tables, comparing the results of the cephalotribe, the forceps-scie, and the transforator.

| | Cephalotripsy 170 | Forceps-scie 130 | Transforation 53 |
|---|---|---|---|
| · Deaths. | Per Cent.<br>41·17 | Per Cent.<br>22·30 | Per Cent.<br>11·32 |
| Puerperal Accidents followed by Cure. | 20·58 | 26·15 | 15·09 |
| Natural Lying-in. | 38·23 | 57·35 | 73·58 |

When we begin to put it in practice, it will be desirable to have a distinctive designation for the operation. I have headed the fifth paragraph with the designation "Transforation," the name adopted by Hubert when he found that the word sphenotresia led to misconceptions as to the limits of the operation. But it will be convenient, at least, to have a designation that will be applicable to all kinds of disintegration of the base, whether the disintegrator reach it through an opening in the vault or be directly applied to the base, as in the after-coming head. The Greek words *βασις*, *base*, and *λυσις*, *loosing* or *disengaging*, lend themselves to an easy combination, with which we are familiar in the words analysis and dialysis. Perhaps the idea of a more complete dismemberment of the several bones might be conveyed by the interjection of the preposition *ανα* or *δια*; but the word would be unnecessarily lengthened, and the idea is sufficiently expressed by the simpler Basilysis. Cranio-basilysis it ought to be in full; but that the base of the cranium is referred to would be always self-understood in a chapter on delivery through a narrow pelvis.

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[1] See the *Cours d'Accouchements* of his son, M. Eugene Hubert, 243. Louvain, 1878.

Whatever designation we may give it, I feel sure that Basilysis is the operation of the future; and for effecting it I propose in the meantime the Basilyst I have described.

### III. EXTRACTION.

When the head has been comminuted by fracturing of the base, it may more safely than after any other form of comminution be left for expulsion to the natural powers of parturition. When, however, as is usually the case, some extractive force requires to be applied, it would be best to make use of the cranioclast. It may have already been applied after the perforation of the vault, to steady the head while the terebrator is doing its work on the basis cranii. After each perforation of the base the operator will naturally make traction with the cranioclast until he feels that the loosened and lessened structures are slipping through the brim.

## ARTICLE II.—*Report of a Case of Metro-perimetritis ending in Abscess of the Uterus.* By ANGUS MACDONALD, M.D., Lecturer on Midwifery and the Diseases of Women and Children, Medical School, Edinburgh; Physician and Clinical Lecturer on Diseases of Women, Royal Infirmary.

(*Read before the Obstetrical Society of Edinburgh*, 25*th February* 1880.)

T. S., aged 38, unmarried, a native of Shetland, was admitted to Ward XVI. of the Royal Infirmary, 12th October 1878. The patient had been usually healthy until two years previous to admission, when she caught cold during one of her monthly periods, which caused suppression of urine. Twelve days afterwards she noticed a swelling in the abdomen, which, however, gave her no serious trouble till about three months before admission. Since that period she has suffered from much pain and recurrent attacks of abdominal distention. She was sent to hospital as a case of supposed ovarian tumour, with a note from the doctor stating that four months ago he had attended her through an attack of peritonitis, which, however, was cured in the course of three or four days. On palpation the abdomen over its lower half was felt to be occupied by an irregularly-shaped, very firm tumour, one portion of which, situated in the right iliac region, appeared to be separated from the great mass of the tumour, which was placed centrally and towards the left. The upper outline of the mass on the whole extended obliquely upwards from right to left, so that the tumour reached higher on the left than on the right side. On the left side it extended as high as the edge of the false ribs, but on the right only about an inch above the level of the anterior spine of the right ilium. It was freely movable, and but slightly tender to the touch. Percussion elicited dulness over every part of the tumour, and on auscultation a loud souffle was heard all over it, while with each arterial impulse the whole mass was both seen and felt to pulsate. No fœtal heart-sound could be heard. On being asked whether it were not possible that she might be pregnant, the patient stoutly denied the fact with imprecations. Subsequently, however, she allowed that this might be the case, and stated that she last altered four months ago, her previous menstruation having been regular, and that she thought she felt fœtal movements two weeks before admission. The areolæ were well developed, and there was some milk in the breasts.

On examination per vaginam, the os was felt to be soft and swollen; from its posterior part a small mucous polypus projected, and a small amount of sanguineous discharge came from its cavity. The mucous membrane of the vagina had a markedly congested wine-leys colour. The uterus was found enlarged, occupying the whole of the inlet of the pelvis, and pushed to the left by what seemed to be a subserous fibroid on the right side.

On *15th October*—*i.e.*, three days after admission—the patient aborted. When examined on the same day the uterine tumour was found considerably diminished in its central and left portions, but the shrinking was in no respect similar to what one would have expected after miscarriage in a normal uterus. The tumour was particularly hard, especially on the right side, while in its middle and left portions the consistence was similar to that of the normal uterus. The tumour on the right, though still separated by a slight depression from the upper and left part, was now clearly ascertained to be continuous with the uterus. This right part was also noticed to be particularly tender to touch. On vaginal examination, the uterus was felt to be much enlarged towards the left, and to occupy fully the pelvic inlet. Pain was complained of when any part of the uterus was pressed upon per vaginam. The fœtus was male, measured nine inches in length, and showed signs of having been dead for some days. The eyes were closed, but the anus perforate. The placenta was healthy. The patient herself felt well, there being no elevation of temperature or quickening of pulse, and the discharge moderate in amount.

On *16th October*, the day following the abortion, the patient complained of abdominal pain, which at first appeared of the nature of afterpain. From that time, however, the temperature rose, and continued as high as 102° to 103° for several days, while the abdominal pain persisted.

On *31st October* the patient had a rigor, and the temperature rose to 104°·8, but the tenderness in great measure ceased. Ten-grain doses of quinine, administered from time to time, had a good effect in controlling the fever; meanwhile the patient appeared on the whole to make some improvement.

On examination on 15th November, a month after the abortion, the uterus was felt as an irregular, somewhat lobulated mass, extending to within an inch of the umbilicus. In bulk it resembled a child's head, and was hard and unyielding. The sound passed four and a half inches towards the left, and no parametric or perimetric exudation could be detected *within* the pelvis.

It is stated in the case-book of 11th December that for the last fortnight the patient has suffered from a good deal of abdominal pain and tenderness, and the evening temperatures have been on several occasions as high as 103°, while the morning temperatures have been normal. Poultices have meanwhile been constantly applied. Towards the right side of the tumour considerable increase of swelling is felt, and there appears also to be obscure fluctuation in this part. Some days later the aspirator was used, and a considerable quantity of pus removed. This, on examination by Dr Hamilton, was found to have no specially distinctive character. There was no fœtor present, and no bacteria were seen in it.

On *6th January* 1879 the abscess, which had been pointing for some days, burst spontaneously a little below the umbilicus, in the mesial line, and discharged a large quantity of fœtid pus. A uterine sound, introduced through the abdominal opening, was found to pass first downwards and outwards towards the right for a distance of two and a half inches, where it met with a slight obstruction; on being then directed forwards and downwards, it passed other two inches, when its point appeared to be in the position of the cavity of the uterus. The abscess cavity was emptied as far as possible by pressure, and a large sponge soaked in carbolic solution secured by gauze bandage over the abdominal opening. At next dressing much fœtid discharge saturated the sponge, and the cavity of the abscess was proved to communicate with the uterine cavity, since a sound introduced through the cervix, by being gently guided upwards and towards the right, was made to show its point at the umbilical opening. After careful examination, to make sure that no part of the gut was endangered, a probe was passed through the external opening, and made to elevate by its point the cutaneous surface at the lower part of the abscess, about three or four inches below and to the right side of the principal opening. The point of the probe was then cut down upon, and a drainage tube passed in at the original opening and out at this new opening, so as to secure free drainage of the cavity. The cavity was freely washed out daily for a considerable time, and a sponge and oakum dressing kept over the surface with a gauze bandage.

*2d February* 1879.—The sound was passed into the uterus, when it was found that the organ had greatly contracted since last examination, and that the opening in its wall no longer existed. The cervix could hardly be reached by the finger per vaginam, as the whole uterus had been dragged forcibly upwards and towards the right. The patient continued to improve, was free from pain, and left for the Convalescent House 27th March, with the uterus less than twice its normal bulk, but fixed in the abdomen by the adhesion arising out of the abscess. Three weeks later she returned to Shetland in good health.

The above case is reported as possessing special interest in several respects. It was a case of extreme gravity, since for a long time the patient's life appeared to hang in the balance, but it ultimately ended in complete recovery. Abscess of the uterus is a very rare lesion, and for this reason, if for no other, the case appears worth recording. But the case is especially interesting in a diagnostic point of view. I confess that for long I was misled regarding its true nature. I further think it would have been difficult for me to have avoided the mistake I made in looking upon it as a fibroid tumour of the uterus. It is interesting to notice that the case was diagnosed at first as an ovarian tumour; but we have such a variety of tumours sent to hospital labouring from this now fashionable disease, that we always scrutinize them with considerable doubt.

Whatever symptoms the patient presented when she was ordered south, there were none, when she reached Edinburgh, which could have been considered to point in the direction of ovarian disease. But, on the other hand, the distinction between fibroid disease and pregnancy was by no means so easy. The patient was a person who affected extreme modesty, and, being unmarried, met our hints of a suspicion of pregnancy with the most blasphemous imprecations. The curiously lobulated character of the tumour, which was given it by the irregular projection of the huge lump on the right of the uterus, certainly did not correspond with the usual appearance of a pregnant uterus. On the other hand, though accompanied by a curious impulse which enlarged the whole mass and pushed the stethoscope against the ear of the observer, the uterine bruit was extremely loud—much louder than we are wont to find in a case of fibroid tumour of the uterus. In those cases, as a rule, the sound is very soft, even when their size is considerable. Then, again, the absence of the fœtal heart was difficult to explain, as we would have expected to have heard it about this period of pregnancy had the child been alive.

The state of the cervix, the state of the breasts, and further, when the patient, repenting of her disgraceful attempt to deceive, confessed that she was probably pregnant, and that she had ceased to menstruate for some months, put the diagnosis of pregnancy as one of the concurrent conditions beyond reasonable doubt. This opinion was rendered absolutely certain by the occurrence of abortion three days after her admission to the hospital. But the abortion only solved part of the mystery. It still remained to decide what the large mass on the right of the uterus was composed of. I concluded that it was a subserous fibroid on the right of the uterus, with a very broad base. But I doubtless was wrong. Still, what else could it well be? Had I sufficiently considered the statement made in the letter which accompanied the patient when she was sent to hospital, I might have been led to suspect that this mass was of inflammatory origin, as it was distinctly stated in it that the patient had been treated for peritonitis. But I was thrown off my guard by the accompanying statements that the peritonitis had been cured in the course of two or three days, and that the patient now suffered from ovarian disease. In this way, finding one of the statements doubtful and another clearly wrong, I confess I did not give the third statement that attention it deserved.

Again, the shape, size, and feel of the tumour were, with the sole exception of the tenderness, much more that of a fibroid than of an inflammatory tumour. The uterus was much enlarged. The tumour was of firmer consistence than that of the uterus, and was distinctly separated from it by a furrow which was easily felt. The entire uterus was movable, and had formed no pelvic or abdominal adhesions—one or other or both of which one would have expected in the case of exudative perimetritis to such an extent as to produce so large a tumour.

Accordingly, from the defective anamnesis, conjoined with such facts as we could make out, I concluded that the patient suffered from a pregnancy complicated with a large subserous fibroid affecting the right half of the uterus. That being so, I was not a little astonished to find that shortly after delivery symptoms of metritis set in, and that the tumour, instead of getting smaller, in obedience to the law of involution which usually regulates uterine myomata, as well as the muscular wall of the uterus in general, continued to increase.

The symptoms continued to increase in severity, and latterly the fever and lochial putrescence became positively alarming. Ultimately the mass was found to soften, and fluctuation was made out in its surface. This, on aspiration, gave us evidence of laudable pus which had as yet met with no putrescent element, consequently did not communicate with the interior of the uterus.

The change effected by the aspirator, however, appears to have led to the extension of the abscess cavity downwards as well as upwards, and when the abscess broke, as it did on the morning of sixth day, a few hours before we had arranged to again aspirate the cavity, it was found that the abscess was abominably stinking, and that it communicated on the one hand with the cavity of the uterus, and on the other with the external surface of the abdomen, through an opening near the umbilicus.

How the case originated is still to my mind not at all plain. It is clear that ultimately we had metroperitonitis, with the production of a large amount of inflammatory deposit either in the right uterine wall or upon it. But whether the case had commenced as a metritis primarily, and had come to project forwards the right side of the uterus, and had secondarily involved the peritoneum, I cannot see any evidence sufficient to decide. The only point of importance that indicates a leaning towards the one or other side is the fact that the patient was believed to have suffered from a temporary attack of peritonitis. That would seem to indicate that the case had at first affected the peritoneal aspect of the uterine surface, and had spread secondarily to the muscular wall. It might be suggested that the tumour, after all, was a fibroid, which suppurated after delivery, and thus broke up and destroyed itself. This, of course, is an unusual history for such tumours, and there seemed nothing in this patient's condition likely to operate upon such a fibroid, nor were there any structures like the debris of such a tumour discharged from the fistula; therefore, without attempting to dogmatize on a subject that is sufficiently obscure not to admit of dogmatic opinion or statement, I must say that it appears to me that the sequel of the case seems to point towards the opinion that the large mass on the right of this woman's uterus was purely of an inflammatory nature.

As to treatment, little is to be said. Till the suppuration appeared, we treated symptoms as they arose. After establishing the fact that we had to deal with a metro-peritoneal abscess, we endeavoured to keep it aseptic. In this, however, we failed. Next we secured free drainage of its cavity, used antiseptic washes, and endeavoured to support strength during the time the utero-abdominal fistula was discharging. Although the patient certainly looked very ill for long, we were gratified in the end to find the case terminate in complete recovery.

## ARTICLE III.—*General Exfoliative Dermatitis.* By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

(*Read before the Medico-Chirurgical Society of Edinburgh*, 4*th February* 1880.)

WRITERS have from time to time described, under the terms "pityriasis rubra" and "dermatitis exfoliativa," and their congeners, cases characterized mainly by intense redness of the skin and more or less cuticular desquamation. Mr Jonathan Hutchinson[1] and Dr Buchanan Baxter[2] have recently, in an exhaustive manner, drawn attention to the subject; and the perusal of their papers led me to place on record notes of some cases, five of which have been under my own care, and one which Dr Douglas Maclagan has kindly permitted me to recount, all of which offer many interesting peculiarities.

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[1] *Lectures on Clinical Surgery*, vol. i., 1879. (On certain Rare Diseases of the Skin.)

[2] *British Medical Journal*, 19th and 26th July 1879.

### Case I.—*Chronic General Exfoliative Dermatitis; Asthma; Albuminuria and Unilateral Sweating.*

A. R., 24, native of Perthshire, where he was brought up and employed at farm work, was a weakly child, and suffered much from an eruption, probably eczema, of the scalp, but he could do a good day's work in the fields. His present disease began on his legs, then spread to his arms, and finally invaded his entire body. I first saw him on the 16th March 1878. Stripped, the skin of his whole body was seen to be infiltrated, dry, harsh, and coarse, and might not inaptly be compared to rhinoceros hide. The natural lines and furrows were opened out and exaggerated. The condition of the skin on the legs and arms resembled eczema squamosum, being covered here and there with thinnish crusts and dry, whitish, branny scales. The hue of the skin was everywhere dusky, and besides, while on the limbs there was considerable increase of pigment, the colour on the chest and abdomen was as dark as that of a mulatto, and was overlaid by thin papery plates. There was an entire absence of lanugo, but the hair on the head was straight, dark, and remarkably thick, and there was a moderate amount of short dark beard. In addition to infiltration of the skin, there existed much subcutaneous œdema. Itching was troublesome; the legs especially showed some excoriations. Tongue furred in centre, thirsty. Heart-sounds feeble; pulse 72, of fair strength. Chest resonant all over; breathing laboured, with some sibilant rales. He suffers severely from spasmodic asthma. Urine scanty, acid, one-third albumen; deposits, granular urates, but no casts. He was ordered—

℞ Liq. ammon. acet., ℥ij.
Acid acetic. dil., ʒss.
Tinct. ferri perch., ℥ss.
Tinct. digitalis, ʒiiss.
Aquam ad. ℥viij.

Of this one tablespoonful thrice a day, and a vapour bath several times a week.

19*th*.—When seen this afternoon his breathing was much easier, and the curious phenomenon of unilateral sweating was presented; the left half of the body was moist and perspiring gently, the right was quite dry. This, he now informed me, has been always the case since his present illness began. Sometimes the one, sometimes the other half of the body perspires; never both at the same time. For about a day before the perspiration begins to flow, the axillary glands on the side which is to become moist swell and are painful; sweating lasts in general about twelve hours. A small piece of skin was removed from the abdomen, hardened, and stained, but the sections showed nothing. When seen on the 25th, at five P.M., he was perspiring freely on the right side; the left was on this occasion dry. The temperature of both sides was carefully taken several times in each axilla with a very delicate thermometer. On the right, the perspiring side, it was 98°·6, on the left 99°; the pulse 66, of good strength, regular. Inunction with unguentum petrolei was now added to the internal treatment, and under this he slowly improved. The albumen disappeared from the urine, the dyspnœa became less, the condition of the skin almost natural as regards thickness and tendency to scale, but was still darker in hue than is common when he was last seen, some months after. When heard of not long ago he was reported to be quite well.

There are many who would look on this as merely a case of eczema, and to it there is perhaps a closer resemblance than is met with in any of the others to be shortly related. Dr Liveing,[1] who is among those who regard pityriasis rubra as a peculiar form of eczema, states that from careful microscopical examination he has in several cases detected traces of dried exudation on the under surface of the scales, and considers the "slight exudation which occurs between the layers of cuticle as one of the chief causes of their very rapid exfoliation." One point in distinction seems to be the uniformity exhibited in the lesions. There were no papules or vesicles to be found anywhere; infiltration, dusky redness, pigmentation, and exfoliation comprised all. The albuminuria, too, is a peculiar feature. Liveing met with it in two typical cases which were under his care at the Middlesex Hospital. Any improvement in the condition of the skin coincided with a diminution in the amount of albumen discharged. The excretory action of the skin and kidneys is compensatory; long-continued congestion of the former throws increased work on the kidneys, and yet it is mainly through them that we can in our treatment give relief to the skin. I have found no mention elsewhere of unilateral sweating in exfoliative dermatitis; this was present on three occasions when I visited the patient. The right half was moist on two, the left on one of these. As was to be expected, the temperature was highest on the dry side.

### CASE II.—*General Exfoliative Dermatitis; Giant Urticaria; Pityriasis Pilaris; Recovery complete.*

A. B., aged 68, was an active and healthy man till eleven years ago, when he met with an accident. The effects of this for a time depressed him, but by degrees he regained his cheerfulness and contentment. During his previous life he perspired freely after exertion, so much so as to necessitate an immediate change of linen. In the summer of 1877 he had an attack of gout in both feet. Since then he remarked he perspired less, and for some time before his present illness he ceased to perspire at all. Without any distinct reason, but from an idea it was good for him, he began to take lime-juice, and continued this till his attack. This was the only alteration made in his diet or mode of living. All his life he has been subject to slight colds, lasting three days.

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[1] *Handbook on the Diagnosis of Skin Diseases*, p. 99.

In December 1877 his scrotum became itchy, and numerous scales formed on it. I was unable to ascertain whether any redness of the surface preceded this. The itchiness and scaling spread to the arms, and rapidly were universal. In parts there was some slight moisture, but no vesiculation or crusting. The itchiness was intense and annoying. Desquamation was now extremely profuse; his bed, in the morning, seemed as if cotton wool had been thrown on it, handfuls of dry papery scales being strewn on the sheets. By-and-by the legs became œdematous, and the urine scanty and thick, though this latter symptom improved under diuretics of acetate of potash. On the hands alone numerous fissures formed, which healed under the use of tar water. At this time, too, warm baths containing soda were ordered, but these caused so much pain and tension that only four were taken. Narcotics were required to procure sleep, but were less used latterly.

He came under my care on the 7th May 1878. The first thing which struck me was the bright rosy colour of the entire cutaneous surface. Pressure lessened this for a moment, but it instantly returned. On the arms, for example, the skin was red, smooth, shining, and seemed tightly stretched, but on pinching it up it was not thickened, but felt delicate and pliant. On the shoulders and back were more or less abundantly disposed fine leaf-like scales of dry epidermis, which, when stripped off in flakes, were as thin as tissue paper, easily removed, and left a surface beneath glossy, dry, and uninjured. The scales were free at one margin, and slightly curled. In the flexures of the groins and between the nates was a slight accumulation of macerated cuticle, and the surface felt damp. There was some degree of seborrhœa on the scalp, and the scales were thicker and harder. The ears, at least the pinna, bore a slightly eczematous look. The face was only slightly reddened. The hair on the scalp was extremely scanty; thin before, it had greatly diminished of late. On the pubes there was none, and on the trunk it was either absent, or, where still present here and there, it existed only as the finest down. The nails were dry, furrowed longitudinally, and discoloured. The legs and feet were œdematous. There was not now itching or burning, indeed, no uncomfortable sensation, but there was great sensitiveness to cold, and a tendency to be easily chilled; temp. 97°·8, pulse 70, full, soft, and at times slightly intermitting. In the mitral area was heard a distinct systolic bruit. Respiratory sounds rather harsh; no cough; no dyspnœa. Urine normal and plentiful. Tongue healthy; appetite admirable; bowels moved twice daily. He lived generously, and drank three glasses of sherry well diluted daily. He was confined nearly absolutely to bed. He was put on moderate doses of digitalis, with nitrate of potash, and a calamine lotion was applied to the body, while the legs were carefully bandaged with a flannel roller. As under the use of the lotion desquamation rather increased, unguentum petrolei was substituted for it and thoroughly rubbed in; and being found to suit, its application was continued throughout.

*20th May.*—In consequence of the subsidence of the œdema there can now be felt, on passing the hand over the skin in certain parts, a peculiar brawny condition implicating both the skin and the subcutaneous tissues down to the fasciæ of the muscles. This is especially marked beneath the thigh, in the loose fold over the biceps. The skin here feels dense and hard, and can only be pinched up with difficulty. It is most developed on the left side, but exists also on other parts of the body.

On the 24th it was noted that one of the peculiar brawny indurations, the size of a crown piece, had arisen in the skin over the spine, about the middle of the dorsal vertebræ, in a situation where nothing of the kind previously existed. After a duration of ten days it slowly disappeared. Some tincture of the perchloride of iron was now added to a smaller dose of digitalis.

*July 1st.*—There are now no scales anywhere save on the scalp. The legs have been well kneaded by a professional rubber every day for a quarter of an hour each, for some time, which has had the effect of lessening the œdema and to some extent removing the brawny hardness. The abdomen and back are still redder than they ought to be. Latterly there has been a tendency to diarrhœa, and slight itchiness of skin, much relieved by a lotion containing carbolic acid. As the redness and scaling declined, pityriasis pilaris, as described by Dr Tilbury Fox,[1] showed itself. Here and there round the hairs, where these still remained, there was a heaping up of epidermic scales, giving rise to a little white knot, which was accompanied with some itching at these points. The slight extent to which this condition was developed was perhaps due to the almost total disappearance of hair, the beard and moustache even being thin and fine and straight. He left town now for Harrogate, where he was placed in the strong chloride of iron spring by my friend Dr A. S. Myrtle. While there, however, more or less constant diarrhœa and copious diuresis necessitated abandonment of internal treatment by the mineral waters, but the baths which he took had a very salutary effect. When he returned to Edinburgh after nearly two months the œdema was almost gone, the skin nearly restored to its natural colour and state, and itching no longer a prominent symptom. Some infiltration over the coccyx, and a troublesome fissure there, were the last residues of his complaint. These, however, yielded in time; he finally got well, and has continued so. The cessation of sensible perspiration in this case before the development of the disease is curious, especially in relation to the effect of pilocarpine, to be referred to in the fourth case.

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[1] *Skin Diseases*, 3d ed., p. 254.

### Case III. — *General Exfoliative Dermatitis, recurring after an Interval of Three Years.*

T. S., aged 28, policeman, was sent to me at the Royal Public Dispensary by Dr Littlejohn, on the 16th January 1879. He was a stout, well-built man, with reddish-fair hair, who denied and bore no evidence of ever having had syphilis. Three years ago, after being chilled, had an attack of similar nature to his present one, which lasted four months. Three weeks ago he shivered and felt cold, and then he noticed that his knees and elbows were red, somewhat itchy, and the skin over them seemed too tight. The redness rapidly spread over the limbs and trunk, while the cuticle kept peeling off. There never was any moisture of the surface. The arms, and legs as far down as the ankles, and the front of the chest and abdomen are all vividly red, covered with thin, papery, yellowish-white flakes and scales, easily removable, and leaving a dry red surface. The scales are constantly formed and reproduced, quantities falling off in bed. The legs are somewhat œdematous, but elsewhere there is no infiltration of the skin; it pinches up readily. The hands and feet are as yet not invaded, and there is in front of each shoulder an unaffected area of skin. The margin of the advancing disease here shows a series of crescents, as if progress had been made by the coalescence of circular patches. The scalp is scaly. Is very sensitive to cold or lowered temperature. Temp., 98°; pulse, 78. Heart and lungs healthy. Urine highly acid, effervesces freely on the addition of nitric acid, throws down on cooling a dense deposit of white granular urates; contains no albumen. Ordered a mixture containing tinct. digitalis, acetate of potass., and nitrous ether, to have warm baths, and to be well anointed with ung. petrolei, and to remain constantly in bed.

On the 24th January it is noted that the redness has much diminished on the trunk and limbs. Itching is considerable, especially at night, and here and there are excoriations made by the nails. Urine is now copious; only slightly acid, and no longer deposits on standing. A small portion of skin was removed some days ago from a part of one leg which showed most intense redness, for examination. He was admitted to-day into Ward 3, Royal Infirmary, under Professor Maclagan, to whose courtesy I am indebted for permission to state shortly the further progress of the case. Dr Maclagan, thinking the action of the diuretics had now been carried far enough, put him on half-drachm doses of tincture of perchloride of iron thrice a day, and to have the wet pack for half an hour night and morning. In the beginning of February the arms presented an appearance much like universal psoriasis, viz., thick, white scales on an infiltrated base, but no intervening sound skin.

*19th February.*—The skin of the arms was now in most parts nearly normal, though slightly too much injected, and in some parts, more particularly the bend of the elbows and back of the wrists, were spots identical with psoriasis guttata. Legs still redder than they should be, but more in patches.

11*th March.*—Surface now entirely free from scales, and healthy in condition. Scalp hair has become thin, but scaliness quite gone. The same treatment was continued throughout, and soon after this he was discharged well. The portion of skin removed showed some dilatation of the capillaries and a moderate degree of migration of leucocytes into the meshes of the corium, which was somewhat opened out. Dr Baxter has explained the occurrence of pityriasis pilaris in some cases by the implication of the hair-sheaths, (in sections of skin made from one of his cases,) in the general proliferation of the epidermic tissues.

For permission to relate the following case I am indebted to Professor Douglas Maclagan, whose patient he is in the clinical medical wards of the New Royal Infirmary.

### CASE IV.—*General Exfoliative Dermatitis of Thirteen Years' Duration, Uninfluenced so far by Treatment.*

J. R., 22, teacher, was a healthy child, and knows of no hereditary tendency to skin eruptions. Thirteen years ago, without any cause he is aware of, some red patches came out on the backs of his hands, in the same situation as, and like the blotches of, erythema exudativum multiforme; but these, instead of remaining discrete, soon became united, and now the general hyperæmia advanced steadily from its margin, and in a month was universal. There was no itchiness, unless when the skin was hot, and this has also been the case ever since. Exfoliation of cuticle followed the hyperæmia, which persisted, and the desquamation reached such an extent that whole shovelfuls could be gathered from his bed even twice a day. He had but little, if any, downy hair on the surface, and his scalp hair did not fall off. There never was any moisture on the surface, which was constantly dry and scaly. The nails were implicated. This attack lasted a year, and in respect of scaling was the worst he has ever had. The shedding of cuticle ceased first, the redness continuing long after it was gone. Only on two parts the disease did not disappear,—on the nose, where little dry papules, pityriasis pilaris, persisted, and on the ears. Probably the affection wore itself out, as the treatment, he says, which consisted of inunction with olive oil and gradually increased doses of arsenic, did him no good. He continued thus nearly well for nine months. Then the disease made a fresh start, spreading from those points where it had lingered; and this, it may be noted, it has invariably done after its first appearance, not again making a commencement in a sound area of skin. Professor Laycock, whom he saw at this time, put him on arsenic, and ordered him to wash with coal-tar soap. He did not long go on with this treatment. It was summer; the soap dried his skin so that it was painful and bled. Since then he never was free from his trouble; if for a time the face healed, some other part remained affected. Five years ago his face was painted over several times with collodion; up to that time it, like the rest of his body, was dry and scaly. Since then, besides scales, impetiginous pustules have appeared on it. In October 1878 he placed himself under the care of a well-known specialist, and for six months was treated. Twice arsenic was given; from a dose of five minims of liq. arsenicalis it was steadily increased till fifteen were taken three times a day. This maximum dose—one which must generally be reached in chorea before any impression is made—was persisted with for three weeks. Then he became hot and uncomfortable, the skin affection more annoying, and the scaling greater, while his appetite failed, so that it had finally to be given up. An ointment containing chrysophanic acid was applied. This did not pain him, but made his skin feel as if too tight. Most relief was obtained from the application of ung. diachyli Hebræ. He was admitted into Ward 22, under Dr Maclagan's care, on the 1st November 1879, and I saw him there for the first time on the 10th. The skin, with one or two exceptions to be noted immediately, was over the whole surface deep scarlet red in hue, somewhat paler, perhaps, on the thighs. On the outer side of the hands, over the knuckles, the thumbs, and also, but not so markedly, between the fingers, the colour was almost normal, only the skin looked thinner than it ought. On the arms, especially on their outer aspect, this reddened surface seemed as if thickly dusted with flour. This appearance resulted from the presence of a thick layer of white scales, the centres of which were attached, while their edges were free and curled up. These were pretty firmly adherent; when removed, the skin beneath was red, dry, and with its transverse markings unusually plain. Oil had been applied to the face and backs of hands, and the surface was moist, with gummy crusts and some pustules—indeed, a pustular eczema. On the thighs there were no scales, merely hyperæmia; elsewhere there were more or less scales. The margins of the eyelids were red and everted. On the backs of the phalanges, where groups of strongish hairs are usually present, the hairs were broken off, and round each was a little heap of epidermis—pityriasis pilaris. On the palms and soles the skin was dry and harsh. There was not much infiltration, yet from want of pliancy the skin could not easily be pinched up; the subcutaneous fat, too, was deficient. The nails were long, narrow, and claw-like; on the toes much thickened, with accumulated epidermis below them—onychogryphosis. They grow very quickly, nearly a quarter of an inch a week. His general health was good, appetite fair, lungs and heart healthy; pulse 74–80. Temperature normal, urine copious, no albumen, does not perspire. He took occasional baths, and had ♏xxx. tinct. ferri perchloridi thrice a day.

*6th January* 1880.—This treatment has been persevered in till now, with but little if any effect. A subcutaneous injection of pilocarpine was on one occasion administered; it produced sweating only on the slightly affected parts, as the hands, feet, and thighs none on the portions of the body which had been the seat of continuous congestion for years. When a repetition of the pilocarpine was tried, it induced sickness, the local sudorific effect being the same. Ergot had no influence in lessening the cutaneous congestion. I suggested to Dr Maclagan the administration of carbolic acid, which Neumann found to diminish the hyperæmia in psoriasis, and Kaposi had found curative in a case of pityriasis rubra.

*4th February.*—The internal administration of carbolic acid in one-grain doses twice a day, together with the outward application of resin spirit, has now been continued a week. The left arm may be said to present a natural appearance as regards colour; it is still desquamating, though not to such an extent as formerly. The right arm is much paler, though still slightly redder than normal, and the exfoliation is not much less. The hands are decidedly better; the face much the same. The remedy has scarcely had time for a fair trial, but so far it is the only one which has influenced the disease in the smallest degree. How much effect is due to the carbolic acid, and how much to the resin spirit, it is impossible to say, but both may be said to exert a similar influence in lessening hyperæmia of the skin. A point to be noticed in this case, and which equally applies to all, is the inertness, if not the positive injuriousness, of arsenic. Hans Hebra gave to one of his cases 400 grains of arsenious acid without effect. All these cases occurred in adults, were essentially chronic in character, and so far none proved fatal. The fifth ran an acute course. The patient was a boy of healthy parentage, but it ended in death, though not until the dermatitis had nearly, if not altogether, passed away. If the previous ones are to be regarded as examples of the pityriasis rubra of Hebra, this forms a connecting link between that disease and pemphigus foliaceus, a relationship which has been insisted on by Hutchinson and Baxter, and more recently by Behrend,[1] in a contribution on pemphigus, as attacking in an epidemic form newly-born infants, to which Ritter von Rittershain[2] had previously directed attention.

### Case V.—*Hooping-Cough of long duration; Acute Exfoliative Dermatitis, with tendency to formation of Imperfect Bullæ; Death from Broncho-Pneumonia.*

A. S., 6 years old, a strong healthy boy, who ailed nothing till he took hooping-cough in early spring of 1879. Throughout the cough was of a very severe character, and there was persistent feverishness. The disease remained unaffected by all ordinary remedies. Full doses of morphia for a time allayed it, but caused so much digestive disturbance that it was necessary to cease its administration. In the beginning of April he was put on five-grain doses of hydrate of chloral, given at varying intervals, so as to keep the paroxysms as much as possible under control. A very considerable quantity of chloral in all was taken, but the relief afforded was only temporary. On the 23d April a red flush appeared on the face, and soon spread. On the 25th this consisted of red, irregularly-contoured patches, disposed with tolerable symmetry, with well-defined margins, and distinctly elevated above the surface of the skin. It was not itchy, and no sore throat accompanied it. On the face it occupied the centre of both cheeks and the chin, leaving clear the part round the mouth. There were some patches on the forehead. The back and upper part of the front of the thorax were thickly and symmetrically covered, the abdomen scantily; the flanks and sides of the chest were free from eruption. Densely-set patches occupied the extensive surfaces of both extremities; there were none on either popliteal region. The palms were swollen and red. Some sickness and vomiting. Cough still continued. Pulse weak. Urine acid, with excess of phosphates. A saline mixture was ordered, and dusting with starch.

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[1] *Vierteljahresschrift für Dermatologie und Syphilis*, 2 and 3 heft, 1879.

[2] *Central Zeitung für Kinderheilkunde*, October 1878.

*29th April.*—The patches of eruption have now become of a buff yellow colour, and round each patch, and defining it from the as yet unaffected skin, is a pinkish halo. Tongue coated with soddened epithelium.

*30th.*—He was seen to-day in consultation by Professor Douglas Maclagan. The surface is now swollen, and erythematous all over. The earlier eruption is now mapped out as faded yellow circles on more extensive areas. Imperfect bullæ, resembling those of pemphigus foliaceus, are scattered over the body; these burst before they become tense, and have a macerated appearance. Skin dry and non-perspiring. Some broncho-pneumonia. Dr Maclagan confirmed the diagnosis of dermatitis exfoliativa, with a distinct relation to pemphigus foliaceus. Three grains of quinine were now given every four hours, and the body dabbed over with a calamine lotion, which gave much relief.

*1st May.*—Mouth raw; lips bleeding, and black from coagulated blood. Still fresh crops of imperfect blebs, especially on fingers and extremities. Urine free, acid; no albumen; no deposits.

*5th.*—Crusts now scaling from face, and the skin beneath ragged remains of bullæ healing. Tongue also becoming cleaner, but breathing still hurried, and cough troublesome. From this time the desquamation proceeded steadily, leaving the skin below apparently normal, though tender; but the pneumonia gained ground, and, notwithstanding free stimulation and all care as to diet, he died in much distress on the 16th. The temperature varied from 101° to 104°·4 (on the evening of the 5th), and the pulse was rapid and weak. No chloral was given after the eruption first came out. The question of this last case owing its cutaneous manifestations to the chloral administered for the relief of hooping-cough was raised both in Dr Maclagan's mind and my own by our recent perusal of Dr R. Farquharson's paper on "Skin Irritation due to the Administration of Drugs."[1] He there alludes to the description by Schüle and Crichton Browne of a chloral erythema occurring at first in spots on the head, afterwards spreading more diffusely; but this was much more than an erythema, and we rejected this mode of causation. Were we, then, to offer any explanation to account for these singular cases? It is plain that they are not mere local diseases of the skin; they own a constitutional origin. Both Hans Hebra[2] and Hutchinson regard the nervous system as at fault, the former placing the disturbed nutrition to the credit of the vasomotor nerves and ganglia, the latter suspecting the spinal cord. The following case tends to support a theory of double origin, an implication of both systems of nerves.

### CASE VI.—*Acute Spinal Myelitis; Acute General Dermatitis, followed by Desquamation; Entire Recovery.*

A gentleman, aged 40, of active business habits, who lived generously, spent the 29th and 30th June 1878 at a country house near Edinburgh; the sun was hot, but the wind easterly and chill, and much of the time was spent lying on the grass under the trees. Soon after this he began to feel pains in his legs and loins, and though still able for work, he took a cab to his office, instead of walking in, as was his custom. For some nights before the 10th July he did not sleep soundly. On that day he had some difficulty in rising from his seat. He took a dose of aperient medicine, which acted. During the night was restless, and perspired copiously. I first saw him on the morning of the 11th, in bed. He told me that, on rising as usual, he found he could not stand, so at once lay down again. He complained of pains in the muscles of his legs, especially between the knee and ankle, in his shoulders, and in the thumb and forefinger of the left hand. The pain was not severe unless when he moved; movement slow, and accomplished with difficulty. There was no pain in the joints particularly, nor did pressure on the muscles cause uneasiness. There was great restlessness and anxiety to change his position. Tongue coated with white fur. Micturition accomplished with ease; urine copious. Pulse 90°, weak; T. 101°·2. There was no pain on pressure over the spine. Thinking there was a gouty element in the case, I ordered him 15 grains of salicylate of soda and 5 minims of tinct. colchici every 3 hours. There was little change till the night of the 14th, when he was directed to take 20 grains of chloral and 20 of potassium bromide. He went to sleep, but was soon roused by involuntary startings of his limbs, which caused acute pain and awoke him. On the 15th the skin of the whole body was swollen, the conjunctivæ were injected, and the face was dusky in hue. Sudden profuse bursts of perspiration came on from time to time. There was some hyperæsthesia. It was possible, though difficult, for him to move his legs in bed, but the attendant altered their position frequently. On the legs and dorsum of the feet large, well-defined patches of a vivid red colour had come out. These disappeared on pressure, but at once returned. T. M., 102°·5; E., 103°·5. He was seen by Dr George Balfour in consultation, who confirmed the diagnosis of acute myelitis, and he was now put on 20 grains of iodide and 30 of bromide of potassium every four hours; the chloral draught to be continued at bedtime. To the mixture 20 minims of liquid extract of ergot were added next day, and 40 grains of chloral at night were also given.

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[1] *British Medical Journal*, 15th and 22d February 1879.

[2] *Viertelj. f. Derm. und Syph.*, 1877.

*17th.*—Slept off and on all night; at one time his breathing became stertorous, his face a deep dusky purple, and his pupils pin-point. He was awakened, and soon recovered his usual appearance, but perspired very freely for some time after. The red blush had now spread over the abdomen and chest, and less extensively over the arms and hands, the individual patches having to a great extent coalesced. The limbs are much less swollen. In the afternoon he became much less restless; the muscular startings had diminished, and ceased entirely when sound asleep.

On the night of the 18th he slept soundly without chloral. On the 19th there were no longer any twitchings, neither those severer which caused pain, nor those slighter painless but perceptible ones. The redness of the skin, too, has paled, and in many parts has gone; slight desquamation is taking place.

*22d.*—Hyperæmia has disappeared, and fine flakes of epidermis are being freely shed. There were slight involuntary movements of the hands during sleep. Voluntary movements of arms still slow and imperfect. He was very drowsy, and talked a little during his sleep. On awaking there was confusion and slight aphasia; he called things by their wrong names—as his leg his shoulder, etc. His evening temperature was now 100°·8; pulse 99, stronger. Having to go to England, I did not see him again for nearly three weeks; but in my absence Dr Balfour most kindly watched over him. On my return he was in the drawing-room, and his only complaint was of aching pains in his limbs, which were permanently relieved by the use, night and morning, of the constant current from thirty cells for three weeks. After this he was and has remained perfectly well.

Additional evidence of the neurotic origin of these cases is afforded by the occasional appearance of those circumscribed œdemas, one of which was noted as having formed on the back in my second example. Mr Milton [1] has identified these slowly forming, slowly vanishing cutaneous indurations with urticaria, a disease the neurotic origin of which no one disputes. Exactly similar hard swellings were met with by him in a case of recurrent pityriasis rubra.

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[1] *On Giant Urticaria*, p. 13.

It will be asked, Are these examples of the pityriasis rubra of Hebra? I believe all belong to a larger class, which includes it. Hebra's early account of the disease must now be considerably modified if we may take, as I believe we may, his son, Hans Hebra,[1] and his son-in-law, Kaposi,[2] as correctly reproducing his present views in their writings. Hebra senior regarded the disease as invariably ending fatally. Now, Kaposi states that he is of opinion he had cured one case, which had, however, passed from his observation. Again, he says, "In a single recent case, in a young man, recovery took place under the internal administration of carbolic acid, after all local measures had only aggravated the cutaneous lesion." And, further, that one of his colleagues, who was acquainted with the subject, had told him that he had himself once suffered from pityriasis rubra and was now well. After this the uniformly lethal ending of Hebra's pityriasis rubra must be given up. Hebra declared that severe itching was absent in pityriasis rubra. Kaposi tells us that the patient may be annoyed by "immoderate itching." Hebra laid down that there was no infiltration of the cutis, with or without the presence of fissures; while Kaposi goes on to say that in course of time localized thickenings of the skin arise, partially due to œdematous swelling, partially to considerable accumulations of scales. "At this period the resemblance is of the closest to a chronic universal psoriasis or an universal eczema." "The stretched skin, too, fissures in places when the disease has lasted some time." There can be no doubt but that the hard and fast line which Hebra, from the observation of a few cases, attempted to draw has now been loosened to a large extent, and that we must admit that there are instances of pityriasis rubra which touch eczema in its more universal forms very closely on the one hand, and pemphigus foliaceus on the other. That the prognosis of these cases is frequently very grave even in this country is proved by the experience of Dr Eddison of Leeds,[3] who had seen three cases, all fatal; and one now under his care he expected to prove so also, treatment of every kind having failed.

From the preceding cases I think we are justified in concluding:—

1. That there is a peculiar form of superficial inflammation of the skin, having as its most marked features persistent hyperæmia and cuticular exfoliation, not, unless of long duration, much impairing the general health, distinct from eczema, resembling erysipelas migrans in spreading from its margin, apt to continue long, rebel-

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[1] *Op. cit.*

[2] *Pathologie und Therapie der Hautkrankheiten*, 1879, p. 390.

[3] *Brit. Med. Journal*, Nov. 8, 1879.

lious to treatment, tending to recur, and in some instances ending fatally.

2. That an allied, if not identical, condition may be met with in an acute form, when it is related with much probability to pemphigus foliaceus.

3. That the exfoliation of laminæ of cuticle is due (as the desquamation after scarlet fever, erythema, etc.) to slight, and in this case continuous, exudation into the upper layers of the cuticle.

4. That for its causation we must look deeper than the skin, some altered condition of the spinal and sympathetic nervous systems being in all likelihood the main factor in producing it.

5. That it is not favourably influenced by arsenic, as its dry and scaly character might lead us to expect, possibly because the deepest, the columnar cells, of the rete are not specially affected, and it is by limiting the over-activity of these cells that arsenic acts.

6. That the best means of controlling it at present available are, at least in its chronic forms:—

*a*. To protect and soothe the skin by bland oily applications, for which the petroleum derivatives are, perhaps, best suited.

*b*. To unload the congested vessels by free diuresis by alkalies, and especially by digitalis.

*c*. When this has been effected, to administer full doses of tincture of perchloride of iron, or small ones of carbolic acid, both of which diminish cutaneous hyperæmia.

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## ARTICLE IV.—*On the Position and Distention of the Female Bladder*. By D. BERRY HART, M.B., Assistant to the Professor of Midwifery in the University of Edinburgh, Secretary to the Obstetrical Society, Edinburgh.

(*Read before the Edinburgh Obstetrical Society*, 11*th February* 1880.)

IN the present communication I purpose attempting to clear up some hitherto unexplained facts in regard to the female bladder. It is probably every gynecologist's experience that in certain circumstances the female bladder may seem very much distended, so far as supra-pubic palpation and inspection give evidence, but that when the catheter is passed, an unexpectedly small quantity of urine is drawn off. The female urethra is short, averaging only 1⅜ inch in length, but yet gynecologists use, and use rightly, a long flexible gum elastic catheter. Finally, surgeons who deal with retention of urine in the male do not meet with such anomalies. Before trying to reconcile these facts it will be best to narrate three contrasted and carefully observed cases.

CASE I.—A. B., æt. 18, was seen in Professor Simpson's out-patient clinique on account of white discharge and pain on making water. Ocular examination of the external parts showed a recent laceration of the hymen and glairy discharge from the ostium vaginæ. On vaginal examination, the cervix was found normal in all respects, except that the os looked downwards and forwards. Bimanually, a fluctuating tumour, reaching up a little above the level of the pelvic brim, was felt in front of the partially retroverted unimpregnated uterus. The catheter introduced drew off 27 oz. of urine (Fig. 3.)

Case II.—Mrs C. was admitted to Professor Simpson's ward on account of retention of urine, necessitating catheterism. Bimanual examination showed a large tumour in the hollow of the sacrum, marked elevation of the os uteri above the symphysis, and a fluctuating tumour in the hypogastric region, reaching almost as high as the umbilicus. This physical examination and the history of four months' amenorrhœa made the diagnosis of retroversion of the gravid uterus perfectly plain. What concerns us here, however, is that the bladder contained only about 23 oz. of urine—a less amount than in the previous instance.

Case III.—Along with Professor Simpson, I saw at the Maternity Hospital a patient with rigidity of os uteri, supposed to necessitate early application of the long forceps. Suprapubic inspection and palpation revealed a fluctuating tumour, bluntly triangular in shape, with the apex down. Exact measurements showed that vertically it extended for 4 inches, and transversely for about the same. The catheter, passed deeply up, drew off only 2½ oz. of clear urine. Some time afterwards the same apparent distention occurred, when 3½ oz. were removed. After the bladder was thus emptied the furrow between cervix and uterus could be felt two fingers'-breadths above the symphysis pubis.

These three cases are typical instances, and evidently call for explanation.

The empty female bladder forms with the urethra a Y-shaped outline on vertical section, the leg of the Y forming the urethra, and the limbs the bladder proper. It has a pubic, peritoneal, and vaginal side. Its vaginal side is uniformly straight, is closely incorporated with the anterior vaginal wall and anterior surface of cervix to about its junction with the body of the uterus proper. The anterior side of the bladder lies behind the pubis, but is not parallel to it. It only touches the symphysis near the top of the latter, and then runs back at an acute angle to the urethra. Thus the greater portion of the posterior surface of the pubis is not in contact with bladder or urethra, and in this way there is a definite angular space here filled with loose fat (Fig 1, *c*). This looseness of connexion between pubis and bladder is of the highest importance, and is found in all pelves and figured in drawings of vertical sections taken from actual specimens. Skene, in his admirable work,[1] alleges that "anteriorly the bladder is closely attached to the posterior face of the symphysis pubis." This, however, is quite erroneous.

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[1] Skene's *Diseases of Bladder and Urethra in Women*, 1878.

The peritoneum passes on to the summit of the bladder a little above the level of the top of the symphysis pubis, and is thence reflected on to the anterior surface of the cervix uteri. When the bladder is empty there is an inappreciable space of the posterior surface of the abdominal wall uncovered by peritoneum. The connexion of peritoneum to the abdominal wall and bladder summit is not an intimate one. Finally, the empty female bladder has an antero-posterior, but practically no vertical diameter.

The bladder arrangements in the advanced fœtus and child in infancy are curiously different from those of the adult. The anterior surface of the bladder in the fœtus lies behind the abdominal wall; the empty bladder, even, is an abdominal organ, and has no antero-posterior, but only a vertical diameter. Its relations and diameters are thus quite the reverse of what it ultimately possesses (Fig. 2). What the precise changes are which bring about its final state in the adult I do not know. There is probably a greater development of the pelvis than of the pelvic contents, and perhaps some sinking of the bladder. At any rate, the adult female bladder, when empty, becomes a pelvic organ. It has not, however, lost its power of becoming an abdominal one. The loose pubic attachment permits of its passage up, while the firm posterior part of the pelvis, by resisting its downward distention, helps this, so far as distention is concerned, by acting as a fixed point.

In the first case narrated the bladder was simply distended. It had pushed the intestines up, tilted the uterus back, but its posterior wall was still in its normal position. The peritoneum was still on the summit of the bladder, but of course was stripped to a certain extent from the lower part of the posterior aspect of the anterior abdominal wall (Fig 3). Thus the bladder, though its summit was only at the level of the brim, was considerably distended.

Now, in the retroversion of the gravid uterus the bladder was certainly distended. Suprapubic palpation, however, misled as to the amount of distention, and for the following reason. The cervix uteri was tilted high up behind the symphysis pubis, and consequently the bladder, to whose posterior angle the cervix is attached, was swung up, as it were, into the abdominal cavity, a movement permitted by the anatomical relations behind the pubis. The peritoneal relations were the same as in case I. In the third case the bladder was of course drawn up, as I have already shown,[1] and its relations were as follows:—In front it touched anterior abdominal wall; behind the child's head, the cervix, of course, intervening. In this way the anterior and posterior vesical walls were in contact, and thus a film of urine, as it were, gave the appearance of distention.

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[1] *Edinburgh Medical Journal*, April 1879.

# POSITION OF BLADDER.

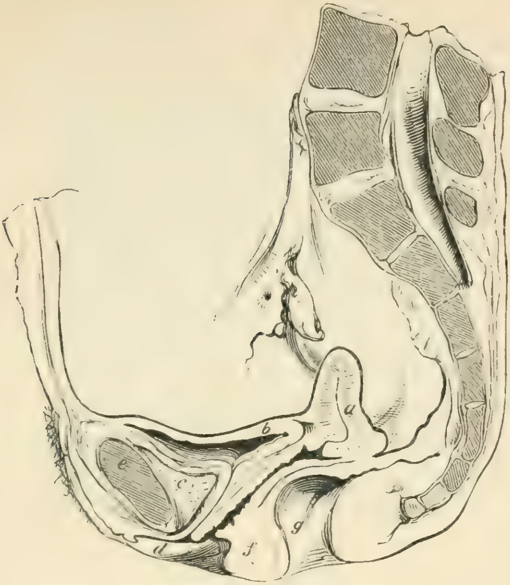

**Fig. 1.—Vertical mesial section of adult female pelvis (a little less than half size).**

*a*, Uterus; *b*, Bladder; *c*, Fatty tissue in front of bladder; *e*, Symphysis pubis; *f*, Perineum; *g*, Rectum

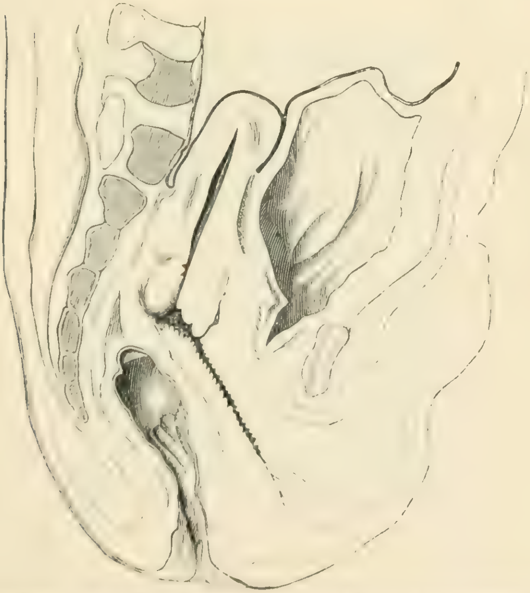

Fig. 2.—Vertical mesial section of fœtal female pelvis (life size), with bladder naturally distended and uterus driven back.

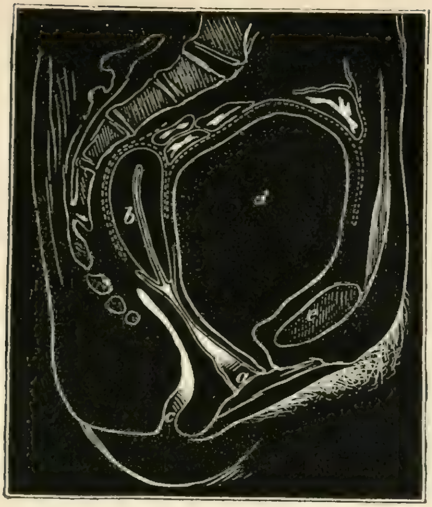

FIG. 3.—Vertical mesial section of adult female pelvis (one-third size), with distended bladder (Pirogoff).

*d*, Bladder.

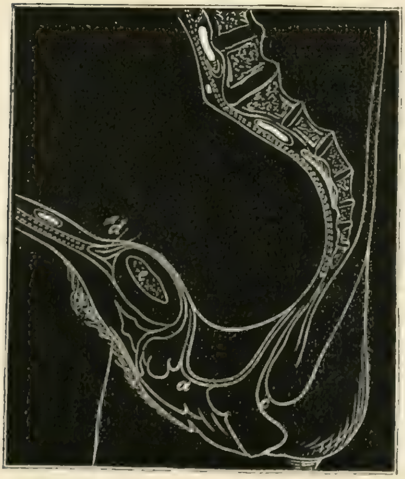

FIG. 4.—Vertical mesial section of woman in labour (Braune), a little more than one-fourth size.

*e*, Symphysis pubis and bladder above, with peritoneum off it.

As I have before pointed out, the peritoneum is stripped off the bladder more or less[1] (Fig. 4).

The conclusions advanced are:—1. The retro-pubic anatomical attachments of the bladder admit of its distention and passage upwards. 2. Suprapubic palpation gives no sure indication of the amount of urinary distention. 3. When the summit of the bladder is above the pubis, it may be—*a*, a pure distention (case 1); *b*, distention plus a tilting up (case 2); *c*, drawing up of the bladder, with almost no distention (case 3).

The reason why gynecologists use a long gum elastic catheter is very evident. I already described the empty bladder in the non-parturient female as forming a Y-shaped figure on vertical section. During parturition, however, the urethra is elongated, and forms with the bladder, on vertical section, a continuous tube[2] (Fig. 4). Only that part of the bladder above the pubis is available for the reception of urine, so that in this way the path for the catheter to travel is increased. In Braune's section of a woman in labour, the distance for the catheter to travel is about four and a half inches, more than twice what it is normally.

In the last place, a comparison of figures 2 and 3 will show that the distended female adult bladder is quite comparable in its anatomical relations to the distended fœtal one. This may point to the explanation that the ultimate changes which convert the urinary bladder from an abdominal organ into a pelvic one are chiefly in the bony pelvis itself.

## ARTICLE V.—*On Delirium Potatorum Traumaticum.* By JAMES PATON BRAMWELL, M.D., L.R.C.S. Ed., one of the Visiting Surgeons to the Perth City and County Infirmary.

THIS affection is happily of rare occurrence, and the literature regarding it of a very meagre character. Few surgical writers deem it worthy of more than a passing notice; others have altogether ignored it. This, however, is certainly to be regretted, as the affection, when met with, constitutes a very serious difficulty in the management of any surgical case of ordinary severity. It is seldom indeed that we observe dissipated persons treated for medical disorders show symptoms of delirium tremens; but when the case is traumatic it is not difficult to understand how a shock to the nervous system, especially where we may expect its equilibrium to be unstable, will tend to produce the disease in question. It is also probable that the want of the habitual dram tends strongly in the same direction, and it would be wise to continue it if the previous habits of the patient were known. Brodie has clearly shown that surgical diseases in drunkards do not get on well unless stimulants are in daily use until the crisis is over.

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[1] *Edinburgh Medical Journal*, September 1879. *Edinburgh Obstetrical Transactions*, Part II. p. 142.

[2] See *Die Lage des Fœtus*; Braune, Tab. C.

The delirium of drunkards after accidents is regarded by not a few as a very fatal affection.[1] Certainly there could not be a more troublesome or alarming one; but we venture to doubt if the prognosis is quite so gloomy as is generally supposed, unless, of course, the lesion itself is of a dangerous character. We have come to this conclusion from the facts we have observed in such cases. Alarming phenomena do certainly present themselves, which do not mean all they appear to do, and which would portend something much more serious if they occurred in patients of sober instead of dissipated habits. For this reason I apprehend that the equilibrium of a drunkard's system is far more easily disturbed than that of a sober man in similar circumstances. It is a fact, at all events, that most alarming symptoms will not infrequently be found to terminate abruptly in this malady in a way altogether peculiar to it, healing action setting in steadily, and apparently hopeless cases altogether changing their condition in a few days. When a patient in a state of wild delirium is dashing his broken leg about like a flail, there is a strong temptation to get out of the difficulty by amputation, but such a step is highly dangerous and quite unnecessary, unless, indeed, the accident *per se* requires it; for, as has been already indicated, the recuperative power is often wonderful in such cases. We have seen sad results follow amputation in the circumstances described, and would earnestly urge that time should be allowed to see what nature can accomplish.

CASE I.—A shoemaker, aged 50, of unsteady habits, fell while dancing on New Year's Day, and was brought to the Perth Infirmary. The tibia was found obliquely fractured at its middle third, a portion of the bone protruding through a small wound in the skin; the fibula was fractured two inches above the external malleolus. The reduction of the fractured tibia could only be accomplished after an inch or two of the protruding part had been sawn off. The limb was then put up on an ordinary M'Intyre splint, and all seemed to go well till the third day, when symptoms of delirium showed themselves. These increased in intensity, and were but partially alleviated by the usual sedatives—opium, bromide, and chloral. The patient was controlled with the greatest difficulty, and twisted his broken leg about in a most alarming and violent manner. For nearly a week he continued in this condition, until I had begun to regard his case as hopeless, owing to his want of sleep and general exhaustion. At the end of this period, however, he began to amend, sleep returned, and he became quite rational and composed, with a subdued manner which contrasted very strangely with his former excitement and violence.

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[1] Bilroth lost half of his cases. See his *Surgery*.

The limb was now put up in a double Gouche's splint, with a fenestrated opening corresponding to the external wound.

It was certainly surprising to see how quickly the reparative process now set in. Several fragments of bone continued, however, to be discharged, and it was not until two months after that he was in a condition to be dismissed. A month later, this man could walk twelve miles in one day. I regret to say that his accident has not cured him of his old habits. He never had delirium tremens before the accident.

Case II.—W., a carter, aged 45, a powerful-looking man, of unsteady habits, was drinking the morning he was injured. In removing a heavy log of wood it fell upon his left leg, producing a severe compound comminuted fracture of both bones, and rupturing some large artery, apparently the posterior tibial. After a consultation it was considered expedient to amputate, which was accordingly done by the modified circular method, an inch below the tuberosity of the tibia. Esmarch's bandage having been used, little blood was lost. The vessels were secured by the antiseptic catgut ligature, and the stump dressed with terebene oil.

It has been alleged that the use of such valuable ligatures, which I regard as one of the greatest improvements in surgery, is not safe unless the antiseptic dressing is carried out in all its entirety; but this, like much else that has been affirmed of antiseptic precautions, is not borne out by facts. I have amputated at the thigh, hip-joint, shoulder-joint, and in other places, but never had a case of secondary hæmorrhage with the carbolic catgut ligature, although it is not my practice to dress stumps antiseptically. But to return to my patient: he bore the operation well, quieted down after his drunken excitement, and had some sleep. Nevertheless, in forty-eight hours symptoms of acute delirium tremens set in. He was ordered 6 oz. of brandy daily, with strong soups and milk *ad libitum*. Bromide of potassium, morphia, and chloral were in succession freely exhibited, but sleep did not follow. Patient very violent, pulse rapid and compressible, throws about his stump in all directions, with the effect of tearing out all the stitches. I now suggested that Rosser's plan should be tried, viz., one half grain of morphia in solution to be injected into his arm every two hours till a decided result followed. After the third dose he slept for ten consecutive hours and awoke quite conscious. He now took stimulants and nutrients freely,—formerly they had all been spat out,—and his condition improved daily. For three days his stump was kept quite open, and then again closed by wire sutures; terebene dressing as before. The reparative process now set in rapidly, and in six weeks he was able to leave the Infirmary. Subsequent history very satisfactory; walks about well on his artificial limb.

Case III. — W. T., aged 40; was in the habit of using stimulants freely. While leading an "entire" horse it struck out and broke both bones of his right leg. The fracture was compound, with a large external wound. The leg was dressed with carbolic dressing and laid on a M'Intyre splint. On the fourth day after the accident the wound began to assume an unhealthy aspect; the patient became very restless, and could get no sleep. These symptoms were the precursors of an attack of drunkard's delirium, which now showed itself. Delirium more subdued than violent, pulse rapid and weak, extensive congestion of both lungs. To all appearance the poor man was sinking, and little or no hope was entertained of his recovery. Chest to be freely fomented with turpentine, and a full allowance of brandy to be administered, with strong soup and milk.

After hanging in the balance for eight days, the symptoms of delirium tremens passed away, the wound improved in appearance, and began to granulate rapidly. In three months it was closed and the bone firmly united. The patient made an excellent recovery, and now conducts a large business, having improved in both health and morals.

The notes of the following case were supplied by Dr Gillespie, house-surgeon, Perth Infirmary:—

CASE IV.—Sarah M'Lauchlan, hawker, æt. 29, was admitted on 26th September, complaining of much pain in the right foot and ankle. The foot and ankle were found to be very much swollen, so much so that it was impossible to say whether it was a case of fracture or only of bruising. She was put to bed, and fomentations applied. She appeared to be quite sober, but could not say how the accident happened, as she had been drunk the previous night, when it occurred. On the afternoon of the third day she had a good deal of vomiting and retching, and was ordered a mixture of bicarbonate of soda and hydrocyanic acid. That evening I was sent for to see her in the medical ward. She was very excited, and labouring under the delusion that people were rolling up small pieces of paper and throwing them at her. She was then sent to the D. T. ward, and the following was ordered:—℞ Syr. chloral hydr., ʒiss; Potass. bromid., ʒss. Sig.—To be given every three hours till she becomes quiet. This had no effect, so the chloral was increased. Even the increased dose of chloral did not quiet her—possibly because it was not pushed far enough. The subcutaneous injection of morphia was then tried, beginning with a quarter grain, which was soon increased to a half grain. Benefit was derived from this, and by 4th October she was free from delusions. Having taken a slight attack of pneumonia, she was removed to medical ward. Her foot and ankle still remained very much swollen and discoloured, as she had danced about so much while under the delusions.

18*th Oct.*—On this day she left by desire, her foot being so far better that she was able to walk.

*Remarks.*—Whenever delirium tremens showed itself, she was freely purged, and while it lasted was supplied with beef-tea and nourishing food. Before leaving, the patient, who was a strong woman, stated that she had been drinking hard for some months before her accident.[1]

## ARTICLE VI.—*On Croup: its Nature and Treatment.* By JOHN MOIR, L.R.C.P. Edin., etc.; District Medical Officer, West Ham Union, London.

(*Concluded from page* 803, *vol. xxiv.*)

I HAVE very briefly indicated the line of treatment necessary in diphtheritic complications, and now give an extract of the proper treatment of the dangerous complication caused by cardiac fibrinous obstruction:—

At the Medical Society of London, Monday, 11th November 1872, Mr Thomas Bryant, president, in the chair, Dr Richardson read a paper "On the treatment *in extremis* of Acute Cases of Fibrinous Deposition in the Heart." The author said that when he, twenty-two years ago, revived the subject of the nature, diagnosis, and treatment of fibrinous depositions in the heart during life, he met with two classes of objectors in the course of the debate. One esteemed Fellow, taking his labours as visionary, had asked the severe question whether the paper had been before the Committee of Reference. Another equally esteemed Fellow had said that, if the facts were as had been stated, they served but to raise up a hopeless knowledge for medical men—therefore *cui bono?* In a few years the first of these objections passed away. By repeated experimental proof he (Dr Richardson) had made it a demonstration that fibrine does in some cases separate in the heart during life; while, from clinical observation, he had been able to point out the symptoms indicating the fact of such separation. The second objection had been met with infinitely more difficulty, and he had not, though so many years had passed, ventured to speak of it with hope of removing it. He had been year after year to see and find cases *in extremis* where death was clearly the result of fibrinous separation, and he had discovered no opportunity of affording distinct service. At last this distressing state of doubt was passing away, and he might venture to speak of some method of approach towards success. He next referred to the exceeding mortality of the cases he had seen. They included cases of croup in children, of pneumonia, of peritonitis, of ovarian operation, of parturient cases before and after labour, and with and without phlegmasia, of erysipelas, of scarlet fever, and of some obscure cases in which nothing was proclaimed until the appearance of the fatal symptoms, except what was called cold or febricula, or remittent feverishness. After describing some in detail, he continued by stating that, in his experience, recoveries after fibrinous deposition had become actually developed were not more than three per cent. Of all classes of disease, croup, he believed, yielded the largest number of examples. After that, diphtheria; and after that the puerperal condition and peritonitis. He proceeded to place before the Society, in a revised form, the special points of diagnosis of fibrinous separation as occurring (*a*) on the right side, (*b*) on the left side, of the heart. Then he noticed anew the condition favouring deposition. Under this head especially he named increased local heat of parts involving large veins as of the extremest importance. For example, erysipelas involving the skin over the lower extremities was exceedingly dangerous. He was of opinion that the local increment of heat was in such cases sometimes the only real cause of danger. The increased temperature of blood in the veins produced change in minute portions of fibrine, and the semi-solid little masses of fibrine formed were carried into the heart, to become nuclei or centres for the larger separations. More speedy or sudden general or systematic increment of heat, as in certain cases of apoplexy, led to separation in the larger vessels and in the heart itself.

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[1] The two last cases were treated by my colleague, Dr Stirling, who has kindly allowed me to include them in this paper.

The greater portion of the paper was devoted to the subject of treatment in cases of fibrinous deposit, and specially in cases *in extremis.* The author here first dwelt on what was bad treatment. He said, so soon as the symptoms of deposition had become developed, all influences that had a depressing effect upon the heart ought to be instantly withdrawn; mental influences telling upon the emotions should be avoided. Sometimes the great distress exhibited by the sufferers—the distress of dyspnœa particularly—tempted the practitioner to give opium. The practice was fatal, and could only be defended on the doubtful ground that all treatment was useless except to secure euthanasia. In cases of croup it was often a question whether tracheotomy ought to be performed to relieve dyspnœa, it being uncertain whence the dyspnœa proceeded, whether from obstructed respiration or obstructed circulation. In such instances the diagnosis was simple, and when it was clear that the dyspnœa was cardiac, the operation was useless, and was better avoided. But in mixed cases, or in cases of doubt, Dr Richardson was inclined to give the patient the benefit of the operation. In purely defined instances of fibrinous separation, the practitioner, having determined what should not be done, has to settle the question what shall be done? The first element of treatment, especially where the separation is on the right side, is to give absolute rest of the body in the recumbent position; for the heart, working under embarrassment, can bear no undue fatigue, and at the same time every active motion increases the danger of loosening the fibrinous mass and of allowing it to float into the pulmonary artery. Rest secured, there should be given as much food as the stomach will bear without distension from flatus, milk rendered slightly alkaline by lime-water, and charged with a little of Liebig's extract of meat, being on the whole the best food. The body, if it be cooling, should be kept warm by external dry applications. Sand-bags are the best when they can be easily procured, and the temperature of the air should be sustained at 60° or even 70° Fah., the air also being kept dry. As to internal remedies, the author had first inclined to the free exhibition of alkaline solutions, especially ammonia; but in a case in which, several years ago, he carried out this treatment, using the bicarbonate of ammonia, and which terminated fatally after several days, although the concretion was found to have greatly softened and broken up, the blood was reduced to such an extreme solubility, the corpuscles so extensively destroyed, that he had found the remedy was as serious as the malady. He had suggested the injection of ammonia by the veins in these cases, but had held back, for the reason stated above, from following out the idea. He had tried inhalation of ammonia, but without sufficient success to warrant enforcing the plan. Lately, seeing the all but invariable fatality that followed the fact of depression, he returned again to the use of ammonia as a remedy, by administering it in large and repeated doses in combination with iodide of potassium, using, not as before, a salt of ammonia, but the liquor ammoniæ of the Pharmacopœia. To an adult he had administered ten-minim doses of the liquor ammoniæ in ice water every hour, with from three to five-grain doses of the potassium iodide every alternate hour. This treatment has been followed by a degree of success he had never anticipated. Nothing could be more remarkable than the fact of the quantity of ammonia that could thus be administered without danger, except the fact of the degree of fluidity of blood and of blood-corpuscles that could be recovered from. In proof of this he detailed two cases in which this treatment had been followed out with the effect of entirely relieving the heart when death seemed all but certain. One of these cases had ended in slow but entire recovery, and the other had now progressed favourably for nine weeks. The addition of alcohol to the treatment in the management of these cases was then discussed. The direct effect of alcohol in these cases was unfavourable when taken alone, but with ammonia it might be given with advantage whenever the heart was commencing to fail in action; the solution of ammonia in alcohol might then be substituted for the aqueous solution, or brandy might be given in half-ounce doses every hour; alcohol, however, was to be held in reserve as an adjunct rather than given as a remedy. The course of the symptoms during recovery, the dangers that appeared, the changes of blood, and the risk of secondary pathological modifications in remote organs, and especially in the spleen, were described and subjected to practical comment. In conclusion, the author stated that prognosis was much more favourable when fibrine had separated on the left than on the right side of the heart—the breaking away of the fibrinous mass on the left side being followed sometimes by immediate relief to the heart, and by ultimate recovery. He mentioned a case which he had been summoned from town to attend, and he left the patient apparently *in articulo mortis,* and he was only able to comfort the friends with the hope that the concretion might possibly break away, and the heart become relieved. Shortly after he had gone, the event thus hoped for actually occurred; the semiconscious patient was almost immediately relieved, and except for some temporary numbness of the lower extremities—for the concretion was carried into the abdominal aorta—recovery was completed without an unfavourable symptom.

In these cases of cardiac obstruction tracheotomy is quite inadmissible, and we can only hope that the line of treatment pointed out by Dr Richardson will continue to give more and more favourable results.

I might, in discussing the medical treatment of croup, have mentioned numerous other remedies which have been of use, and justly so; but in giving too much, as is often done, you give "no *distinct leading-string*" for successful treatment,—as the *Lancet* well says in reviewing the very able and valuable work, *Der Croup,* of Dr Friedrich Pauli, Wurzburg,—and thus confuse instead of aid.

However, all our remedies are too often unsuccessful, and from the extreme rapidity and virulence of the disease, or probably more often from "the deplorable negligence of the relations in not calling the doctor in sufficiently early, that is to say, at the commencement of the affection," death occurs, or is only prevented, but very fortunately often prevented by surgical treatment—by tracheotomy.

### (c.) *The Surgical Treatment of Croup.*

From the danger of mistaking the disease for a simple cold, ineffectual treatment, or the rapidity and virulence of the disease itself, the choice now lies between certain death and a good prospect of recovery, by means of the operation of tracheotomy. In every case, *where it is admissible,* the operation at this stage, other means having failed or being palpably useless, ought to be performed as a matter of simple right and duty, even if the relief be only temporary, "since," says M. Trousseau, "a few additional hours are often sufficient to enable the organism to triumph over a *morbific cause,* the action and the effects of which are decidedly temporary." The remarks of the late Mr James Miller, Professor of Surgery in Edinburgh University, cannot be too widely known, and form a complete answer to any objection to the operation, if any such can be raised. In his *System of Surgery*, pp. 873–4. he says: "The question arises, Shall we perform or shall we not resort to tracheotomy? This question has been differently answered by the experience of different surgeons. By some, it is considered a desperate attempt to save life, and therefore not justifiably undertaken so long as medical treatment holds out a shadow of hope of checking disease. By others, a great success in the employment of tracheotomy, in cases of supposed croup, has led them to resort to its performance in every case, whenever the respiration becomes seriously interfered with, whatever the stage of the disease—so long, in fact, as the little patient is struggling ineffectually for breath, and not actually moribund. To the latter class of practitioners we incline to belong, and hold that the surgeon should unhesitatingly undertake the operation whenever the dyspnœa is urgent, sustained, and accompanied by drawing of the lower part of the chest in inspiration, with recurring paroxysmal attacks, a rapid pulse, becoming feeble, a congested or a pallid and leaden aspect, with tinged veins, and a copious perspiration. If the operation is not performed under such circumstances, death may ensue during the next paroxysm; or if it be delayed longer, the delay is more likely to induce œdema of the lungs, to increase the likelihood, therefore, of congestion or actual stasis of the pulmonary circulation, to exhaust the heart by its inability to force onwards the blood accumulating on the right side; and lastly, still further to diminish the powers of life by the persisting dyspnœa, and the continuance of depressing treatment, so that the little chance becomes no chance at all when tracheotomy is performed at a later period. No doubt, the tube and wound in the trachea may be causes of bronchitis, but certainly impending asphyxia, œdema of the lung, and its consequences, and exhaustion of the patient, are far more likely to act injuriously in determining not only bronchitis, but also collapse of the lung, if permitted to continue till a fatal issue is obviously threatened. No doubt, also, the false membrane may extend beyond the tracheal opening; that, however, does not preclude its exputation after tracheotomy any more than before; nay, it saves the patient from the risks of the shreds or casts becoming impacted in the glottis, and thus inducing instantaneous death. But experience proves furthermore, that where it does not save the little patient from death, it alleviates his sufferings, affording him respite from struggling efforts, at a small expense of temporary additional pain, while it stills the hoarse cry and the barking cough which have, during the weary watch, been so sore a trial to his anxious friends. In undertaking the operation, the surgeon should satisfy himself as to the condition of the chest, seeing that the want of expansion acts equally on both sides, that the respiratory murmur—not the hoarse and shrill rhonchus communicated from the larynx and consonating through the bronchi of the lung, but of the air entering both lungs—can be heard, and that there is no dulness on percussion at either base. His duty *then* is plain. He should perform tracheotomy as speedily as possible. The operation may not save his patient, or the case may not be one of true croup, but certainly nothing else will help the sufferer whether the case be croup or not."

It is quite evident, then, that tracheotomy ought always to be performed as early as possible, if the medical treatment has failed, certainly before the last stage sets in, when recovery under any circumstances is all but absolutely impossible, for, when the bronchi are clogged with viscid mucus, the bronchial membrane swollen and infiltrated, and false membrane formed most likely in the minute ramifications, the operation can be of no service, as from the interference with the pulmonary circulation, and the presence of cardiac fibrinous obstruction, there are fatal influences at work which the operation cannot possibly affect, or only injuriously. There are other circumstances, also, to be taken into consideration in obtaining the greatest possible measure of success from this operation in the cure of croup : these are briefly the size of the tube, the place where the windpipe should be opened, the care of the instrument while in the artificial opening, the time of its removal, and the general treatment required after the tracheotomy. In regard to the first point, it is now universally acknowledged that the canula should always be large ; M. Brétonneau insisted that *the artificial conduit should always have, at the very least, the normal diameter of the glottis* of the patient, and this rule should never be departed from. The mode of operating I do not require to touch upon, it is too well described by Trousseau, and many of our British practitioners, but merely mention that it is very essential to make sure that the dilator has really entered into the trachea, so that the canula be not too short, and that after its proper introduction it should be well fixed or the consequence may prove fatal. "The canula should never be placed in the trachea for ten or twenty minutes after the operation. The trachea and the bronchi should be previously cleaned, and the mucous membrane which lines them should be cauterized."—(Trousseau.) In the next place, the spot selected for the incision should be as low down as possible. Mr R. Hamilton of Liverpool, from his own experience of tracheotomy, finds that not more than one case in five recovers, that is to say, that in four of the five the relief for a few hours is great, and then comes an extension of the inflammation, and exudation below the tracheal opening, and death results. From whatever cause, however, this mortality is greater than some other surgeons have met with. Mr Annandale, in showing three successful cases to the Edin. Med. Chir. Society in May 1869, stated that when tracheotomy for croup is imperative, it is highly important that the operation should be as low down in the neck as possible. This is the method adopted in Scotland by Spence, Buchanan, Joseph

Bell, Annandale, etc., with so much success—the result being one cure in three cases. Probably from the same cause, the operation also seems to be much more successful in France than in England, if we are to judge from Mr Holmes's *Surgical Treatment of the Diseases of Infancy and Childhood*, 1868, where he recommends the incision to be made *above* the isthmus, "which, in very small children," says the *Edin. Med. Journal* in reviewing Mr Holmes's work, "is really laryngo-tracheotomy, not true tracheotomy at all. It may be easier to perform, but certainly is not so satisfactory in its results. The mortality in the Sick Children's Hospital seems to be very great. Out of fifty cases in which the operation was performed there for croup and diphtheria, only five recovered. Whether this may be ascribed in any measure to the position of the operation, or whether it depends on the delay in performing it, or on the weak constitution of London children, may be matter for discussion; but certainly the results are very inferior to those obtained in the great Parisian hospitals, —where the operation is performed much more frequently,—and the still better ones obtained in Edinburgh," and in Glasgow by Dr G. Buchanan.

In conclusion, Trousseau, who was a great advocate for tracheotomy, and an eminently successful operator, placed the greatest importance on looking after the proper nourishment of the patient after the operation,—in fact, the most urgent duty. He recommended milk, eggs, custard, chocolate, and soups. In dressing, a round piece of oiled silk or indiarubber should be put between the skin and the canula, to prevent its sides, and the string attached to it, from irritating the wound. The internal canula should be removed and cleaned every two or three hours, or oftener if required. The patient's neck should always be enveloped in a knitted woollen scarf, or large piece of muslin, so that he breathes in through the tissue which covers the neck, and inhales the warm air impregnated with the moisture furnished by the breath. This avoids the drying of the canula and trachea, preventing irritation of the mucous membrane, and the formation of hard scabs, which on becoming detached often cause suffocative and even fatal results from occlusion of the canula. M.M. Trousseau and Guersant lost many cases from catarrhal pneumonia, from not earlier adopting this very invaluable practice.

For the first four days the whole surface of the incision should be vigorously rubbed with nitrate of silver once a day. The canula should generally be removed at the end of the first week, if possible, and the wound closed with plaster; but sometimes simple ointment on linen must be used before the plaster, if the respiration be not yet free. If the air does not pass at all we must replace the canula for two or three days, and then try again. The dressings must be renewed frequently until the exterior wound is completely healed. The bowels ought, from the very commencement of the complaint, and throughout its whole course, to be kept open with simple medicine, such as castor-oil. Sometimes after tracheotomy, the food, if too liquid, gets into the trachea and causes great annoyance; the best way to avoid this is to give thick soup, thick beef-tea, eggs with milk, hard-boiled eggs, and a little solid meat, with only cold water for a drink, either immediately before or a good while after eating. Quinine wine, if the strength has been much reduced, and other tonics are indicated. A good plan adopted by M. Archambault, in cases where the food tended to pass into the trachea, consists in momentarily closing the canula or artificial opening in the neck with the finger, when the child is swallowing; thus it is obliged to use the larynx, and the proper actions of both larynx and pharynx are thus re-established, and valuable lives which might otherwise have been lost are spared, to share the duties and responsibilities of humanity.

Nothing further remains to be said, except the wish that the attempt in these pages to demonstrate the nature and treatment of croup will receive the general acceptation of the reader, and prove not altogether useless as a contribution to the elucidation of a much-vexed and important subject.

*Note.*—Since writing the above, I have had the pleasure of listening to the report of the Medical and Chirurgical Society's Committee on the relations of croup and diphtheria, and of reading the very able paper on Tracheotomy in Membranous Laryngitis, by R. W. Parker, with the subsequent discussion at the same society, which entirely proves the utility and necessity of the operation in many cases in which hesitation has been hitherto felt. The Committee and Fellows of the Medical and Chirurgical Society are by no means unanimous, and Drs Felix Semon and S. O. Habershon put several pertinent inquiries to the members of the Committee, which are held over until the discussion of the report by the Fellows at a subsequent meeting. Dr Dickenson, the chairman of the Committee, also objects to the views of a prominent member being prematurely taken as expressing those of his colleagues, so that at present we must consider that the most valuable part of the Committee's labours has still to follow.[1] Dr Cornelius Fox, however, by his paper on Pseudo-Diphtheria or Spreading Quinsy, in the *British Medical Journal* of 7th December, has added a new element to the discussion, which in great measure re-opens the whole question, and a recent very melancholy occurrence throws a fresh interest on every effort to elucidate the nature and treatment of these kindred affections.

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[1] Since the debate of the Society, I have received a note from Dr Charles West, with which I entirely agree, stating that "the labours of the Committee leave the question very much where it was."

During a visit to America last summer, I found a similar difference of opinion prevail there to what we find amongst ourselves. This subject has long attracted much attention there, for, in 1771 Dr Samuel Bard of New York, as I have already mentioned, wrote a book *On the Nature, Cause, and Treatment of Suffocative Angina.* Among other facts he described inflammatory changes in the parotid and submaxillary glands as almost constant accompaniments of *pharyngeal* diphtheria, since overlooked or misunderstood; but the recent researches of MM. Balzer and Talamon prove this condition of the salivary glands to be correct, and not, as had been previously considered, due merely to lymphatic inflammation, thus fully confirming by physiological experiment the clinical observation of Bard more than a century ago. (See *Lancet*, 19th Oct. 1878.) I am glad, through the courtesy of Dr Oliver Wendell Holmes, to add the conclusions of Dr Calvin Ellis of Boston, a distinguished American physiologist, who has devoted attention to the subject, and is a worthy representative of the highest American professional opinion. He writes:—

"BOSTON, 11*th Nov.* 1878.

"DEAR SIR,—A few days since Dr Holmes requested me to answer the letter in which you asked for a statement of the opinion of American physicians in regard to the identity or non-identity of croup and diphtheria. I do this with pleasure; but you will see, on consulting the various publications upon the subject, that there is the same diversity of opinion here as elsewhere. In much that has been said and written, the real point at issue seems to have been lost sight of, or so hidden by false issues and irrelevant arguments, that the question is rendered all the more obscure. There can be no doubt about the apparent gross difference between what is usually called diphtheria and what has been described under the head of croup; but it is not impossible that the most typical case of the former might be an outgrowth from, a development of, or a modification of the latter. This apparent difference being so marked, attempts have been made to fix the distinguishing points by a close analysis of the various manifestations. In judging the results of these efforts, we must have some standard to appeal to, we must be guided by certain laws, applicable to all inquiries of the kind. Any determination of the relationship of various manifestations of disease must be based either upon a certain symptom, a certain series of symptoms, some pathological change, a series of symptoms in connexion with a pathological change, or the cause. If we ask, in connexion with the question before us, whether any single symptom is sufficient to solve the difficulty, the answer must certainly be in the negative. The same is true in regard to any group of symptoms. When we seek for any constant pathological condition, without regard to symptoms, we are still left in doubt. It has not been shown that any group of symptoms has been shown so constantly in connexion with a definite condition or microscopic character of false membrane, that the presence of one implies the presence of the other. On the contrary, the same group of symptoms has not only been seen in connexion with both varieties of false membrane, but both varieties of false membrane have been met with in the same case. There remains the question of etiology, which is by no means the least difficult, and is still a question only. We may, therefore, say that nothing has been demonstrated yet, in regard to the precise relationship of those expressions of disease described under the heads of croup and diphtheria—certainly the attempts to show diversity have failed. Since writing the above I have seen, in *The Lancet* for 26th October, the report of the committee who have been considering this subject, and notice that they have arrived at substantially the same conclusion. You will find very good articles on croup and diphtheria in the *Boston Med. and Surg. Journal*, 5th July 1877, p. 4, and 14th March 1878, p. 331.—Yours truly,

"CALVIN ELLIS."

I need hardly say that, while admitting the great ability and fairness of Dr Ellis's views, I do not, as I have shown, entirely agree with him.

Dr Weir Mitchell writes :—

"3*d December* 1878,
"1524 WALNUT STREET, PHILADELPHIA.

"MY DEAR SIR,—My own opinion is decidedly against that of my friend, Dr Geo. Johnson, who, I think, believes in the unity of the two diseases. Here, I believe, almost all valuable opinion is against it. In the last edition of Meigs and Pepper on Diseases of Children you will find, I think, a summary of the general view and a statement of the personal opinions of two of our best men. If I can further aid you I shall be glad. Nearly all my clinical work now lies in the direction of nervous diseases, and I see little or none of the acute disorders of childhood.—I have the honour to be, very truly yours, WEIR MITCHELL."

The subject is discussed very thoroughly in the *Transactions of the International Medical Congress*, Philadelphia, 1876, and in the "Transactions of the Philadelphia County Medical Society," *Philadelphia Medical Times*, 1876.

With one more extract I leave the subject at present to the consideration and judgment of the profession. My friend, Dr E. J. Quinan, a physician of repute in Dublin, says :—"I regret much that I have not the leisure necessary to assist you by cases in support of your views with regard to the nature of croup and diphtheria, which I, in common with most practical men here, firmly hold as being correct. Some years ago, when in charge of a very densely populated and extremely poor factory district in the neighbourhood of this city, I unfortunately had several outbreaks of diphtheria, scarlatina, and croup. I had many cases of diphtheria, simple and pure, and in combination with scarlatina and erysipelas, but I have never seen a case of pure or genuine croup existing with diphtheria, although I have had several cases of laryngeal inflammation, cough and hoarseness, following it and scarlatina. These cases, however, never exhibited anything like the false membrane which exists almost invariably in true croup. I firmly believe that the false membranes of croup and diphtheria differ essentially one from the other."

# Part Second.

## REVIEWS.

*Leçons de Clinique Médicale.* Par MICHEL PETER, Professeur Agrégé à la Faculté de Médecine de Paris; Médecin de l'Hôpital Saint-Antoine. Tome Premier. Pp. 824. P. Asselin: Paris, 1873.

*Leçons de Clinique Médicale.* Par MICHEL PETER, Professeur de Pathologie Interne à la Faculté de Médecine de Paris; Médecin de l'Hôpital de la Pitié; Membre de l'Académie de Médecine. Tome Deuxième. Pp. 824. Asselin et Cie.: Paris, 1879.

*Comptes Rendus de l'Académie de Médecine*, 1879–1880.

*Medical Thermometry and Human Temperature.* By E. SEGUIN, M.D. Pp. 446. New York, 1876.

IN our number for July 1877, when reviewing the remarkable lecture delivered by Dr Peter on "Medicine and its Destinies," on the occasion of his opening his first course as Professor of Pathology in the School of Medicine of Paris, we said that "the elegance, wholesomeness, and enthusiasm of his language indicates that the position to which he has been raised will have a powerful influence for good on medical education and medical faith in France." That statement, called forth by the particular discourse then under review, was also specially founded upon our intimate acquaintance with the first volume of the Professor's "Clinique Médicale," which had then been more than three years before the profession. It has since been reprinted, and has lately been followed by a second volume. The work constitutes the most valuable, because the most extensive, philosophical, original, and practical addition to the literature of clinical medicine which has appeared in the French language since the publication in 1868 of the third edition of Trousseau's *Clinique Médicale de l'Hôtel Dieu de Paris*, the latter part of which passed through the press after the author's death, under the editorial care of his *chef-de-clinique*, Dr Peter, upon whom, as the volumes now before us declare, the master's mantle has fallen in all its amplitude.

Few foreign works on clinical medicine are so well known and so much appreciated by English physicians as the lectures of Trousseau. The wide diffusion of the Sydenham Society's translation has, no doubt, contributed largely to this result. By no other means could they have been made so easily accessible to the profession. The Society would, we think, confer another great boon on its members by enabling them to place the lectures of Peter in an English dress beside those of Trousseau. Not only are they worthy of that honourable position from their own intrinsic value, but they have also a special claim to it from being a complement, as it were, to the volumes of the great master. In our careful perusal of Dr Peter's lectures, we have been particularly impressed with this fact. They are conceived in the same spirit of true clinical research, are similarly abundant in original matter, and are clothed in equally attractive language. Like them, they charm whilst they instruct the practitioner, by mentally transporting him from his closet to the bedside and the autopsy-room, there to observe, reason, and learn in personal converse with the author. They furnish the mind with sound and invigorating clinical food—food which is pleasanter and more easily assimilated than that generally supplied in the best arranged concentrations of existing knowledge called "systematic treatises,"—works which, though often useful, convenient, and necessary for reference or rapid consultation, are, to the advanced clinical inquirer, reading of a most unsatisfying kind.

The teaching of Dr Peter, as embodied in the volumes before us, presents certain features which inspire confidence, making the reader acquainted with the robustness of the author's mind, as well as with his evidently well-thought-out views on matters small and great. It is soon discovered that we are reading the work of an inquirer who is at once patient and enthusiastic—one who freely delivers theories, suggestions, and also not a few novelties in matters of fact, with but little taint of oracular dogmatism, and loyally follows Nature as the only guide to truth in all that relates to the causes, nature, prevention, and treatment of diseases – which he graphically describes, but does not depict as noxious entities, or demons to be exorcised by hydrotherapeia, change of air, or the fashionable nostrum of the day. We should just as soon expect to find Dr Peter laying down a specific routine treatment for phthisis as we should expect to hear of his sending a tuberculous patient on a pilgrimage to the shrine of credulity at Lourdes. His therapeutics of phthisis is not an arsenal of prescriptions, but the rational outcome of his firm belief in the truth that *tuberculosis is an expression of impaired vitality.* In elucidation of this cardinal doctrine, let us quote a very interesting passage describing a case in which impaired nutrition from stricture of the œsophagus caused phthisis. As Dr Peter shows, the stricture was *not a complication of the case, and the tubercular disease was the effect of the stricture.* So far as we know, Dr Peter is the first to place œsophageal stricture and phthisis in their correct relation to one another.

"Strange to tell," says Dr Peter, "the authors who have treated of stricture of the œsophagus have mentioned (when they have examined the lungs) the frequent coincidences of tuberculization of these organs but cursorily, and apparently without suspecting the causation which I am now pointing out to you.

"The fact is one to which my attention was forcibly called during my first year of *internat.* In Gerdy's practice, I had occasion to observe a man of 28 years of age afflicted with cicatricial stricture of the œsophagus; this patient was at the same time tuberculous; and let me now tell you how he became so.

"In a paroxysm of amorous despair he resolved to commit suicide. With this intent, on the 31st March 1854, he attempted to swallow a tumbler of sulphuric acid; but the corrosive violence of the agent stopped the suicidal hand, and prevented him from swallowing more than a very small quantity, which, moreover, was almost immediately rejected by repeated attacks of energetic vomiting. Small though the quantity was which entered the œsophagus and stomach, it was sufficient to produce inflammation of the œsophagus, which it required a month's well-directed treatment to subdue. Though the poor man was cured of his internal burns, there remained that which remains after burns, cicatrices with subsequent contraction of the inodular tissue, so that there went on from day to day an increasing stricture of the œsophagus. By degrees, the patient was able to swallow only *bouillon* and *bouilli.* Under these circumstances, he was admitted to the Hôpital de la Charité on the 1st September of the same year, six months after the attempted poisoning.

"Here, you see, is a man who, up to the time of the event described, was in good health and had never coughed—who five months after the accident began to cough and to become emaciated. To such an extent was this the case at the date when I first saw him, on my commencing my duties as *interne*—that is to say, nine months after the commencement of the symptoms—that he was thoroughly tuberculous, not only in the lungs, but in the intestine; for independently of the profuse expectoration furnished by the pulmonary cavities, he had likewise diarrhœa resulting from intestinal ulcerations. His debility and emaciation were very great. He was something more than tuberculous; he was the most complete specimen of a phthisical subject that could be seen. He died on the

28th February 1855 of peritonitis, by tuberculous perforation, eleven months after his attempted suicide. Thus, in less than five months after the commencement of the obstacle to alimentation, a very formidable obstacle of a wholly material character, the man presented the first symptoms of the tuberculization under which he succumbed six months later.

"At the autopsy, I found the lungs riddled with cavities in their summits, and stuffed with incipient granulations throughout the rest of their extent. There were numerous tubercular ulcerations in the intestines; and in consequence of one of them having become perforated, peritonitis arose, in addition to previous attacks of subacute peritonitis, which had, at a not very distant date, caused considerably numerous peritoneal granulations. This man, *accidentally tuberculous*, was tuberculous everywhere. With respect to the œsophageal lesions, the following are the details:—The œsophagus, throughout its first six centimeters, was normal in colour, and in the rest of its extent was slate-coloured. There was an annular induration at the junction of these diversely coloured parts, sensible to the finger, on a level with the first dorsal vertebra. When cut open, the œsophagus presented a pale mucous surface, thickened throughout the first six centimeters. A fibrous stricture of the inodular tissue was perceptible, of about three millimeters in diameter, and along a length of four millimeters below the annular stricture the cicatricial bands which line the canal were visible. Beneath these strictured parts the mucous membrane was destroyed for a space of from six to seven centimeters: a few isolated patches of fibrous mucous membrane alone persisted. Lower down, the attenuated mucous surface was ulcerated in different places. Here and there were ecchymotic stains and signs of softening. Ulceration and extreme attenuation existed in the neighbourhood of the cardia; there was thickening of the œsophageal mucous membrane; the œsophageal glands were hypertrophied, indurated, and tuberculous throughout the whole of the ulcerated portion of its mucous membrane. The mucous membrane of the stomach was normal."

The case now detailed made a great impression upon Professor Peter, and induced him, as occasion offered, to study carefully cases in which there co-existed tuberculization of the lungs and stricture of the œsophagus; and also those cases in which there was disturbance of nutrition from lesion of the stomach. He gives an interesting account of the result of his researches in his thirty-eighth lecture, from which the passage we have now translated is taken, to which we refer our readers. The passage which we have quoted is a very good illustration of the fact that without hereditary taint, confinement in badly-ventilated workshops, or any other well-known predisposing cause of phthisis, we may have tuberculization induced by a purely accidental and material impediment to nutrition.

Without accompanying Dr Peter throughout his admirable discussion of this subject, we must quote a few lines upon the important fact, increasingly appreciated by physicians, to wit, that there are many cases in which phthisical patients, without being cured of their disease, may be kept living for a long time in a fairly useful and comfortable state, through *an acquired tolerance of the organism for extensive organic lesions.*

"The fundamental idea which dominates and inspires all these lectures upon pulmonary tuberculization is, that tubercule is not tuberculization, nor is tuberculization phthisis. The TUBERCLE is the *product* and the proof of decay of the organism ; TUBERCULIZATION is the *mode of evolution of that product ;* PHTHISIS, the *general result*, more or less imminent, of tuberculization, a sort of *organic cachexy*, the appearance and progress of which we may retard in a great number of cases, while at the same time we can do nothing, absolutely nothing, against the tubercule. It is a downfall in vitality which produces tubercle in the individual ; but it is a downfall which may be temporary or permanent, rapid or slow ; and here is our opportunity for usefully intervening."

It is a pity that patients do not more generally understand that skilful medical direction is immensely valuable in giving comfort, usefulness, and prolonged life to persons labouring under phthisis and other incurable diseases. Every day the popular practitioner meets with incurables who run about from one great city to another in quest of a cure for a malady which does not admit of cure, but the evils of which might be greatly mitigated by skilfully assisting nature to bring about and maintain a tolerance of the organism. Persons acting under sound medical direction may play their part well in the world, though affected with extensive valvular and other organic diseases of the heart ; and others may move about comfortably, eating, drinking, and sleeping like healthy persons, notwithstanding cavities or consolidation of the lungs.

Dr Peter is not only an independent thinker, but he is proud to proclaim that his works assert a special individuality. In proof of the correctness of this remark, we subjoin a passage which, being characteristic and brief, we quote in the original. Speaking of the work which we are now reviewing, he says :—"Mon livre est donc très-personnel : j'ai vu, j'ai pensé, j'ai dit sans autre souci que du vrai. Il m'est parfois arrivé—ce qui me fâche—d'etre en désaccord avec des hommes éminents que j'estime autant que je les aime : mais la vérité était là, m'obsédant, et je l'ai préférée à Platon."

This announcement of the author is a suggestive introduction to a notice of recent discussions in the Academy of Medicine in relation to a new and important subject, to wit, *local morbid temperatures.* As it is at present a topic of discussion in the medical world, both in relation to clinical value and claims to originality, we shall devote the remainder of our available space on the present occasion to an account of the current controversy, reserving for another article or articles a review of various portions of Dr Peter's volumes.

At a meeting of the Académie de Médecine, Dr Noel Gueneau de Mussy stated that M. Séguin, a French physician practising in New York, had published researches upon local temperatures in disease in a work entitled *Medical Thermometry and Human Temperature*, which appeared in New York in 1876. At the sitting of 23d December 1879, Professor Peter replied to Dr Noel Gueneau de Mussy in a speech which gives his view of the question of priority, and describes the personal history of the opening of a new and valuable field of clinical observation. Dr Peter is reported to have spoken as follows:—"The matter to which I wish to call attention is not a trivial question of priority, but one which relates to the exact determination of a scientific fact. Since 1864 morbid local temperatures have engaged my attention. Both the proof that I made researches and the date at which I made them exists in a sealed letter lodged by me with the Academy of Medicine in 1865, and read at a public sitting of the Academy on the 26th March 1867 by Dr Tardieu, who was then president. My conclusions were published in the journals of the day; and I may refer in particular to the full report which appeared in the *Union Médicale* of 28th March 1867.

"In addition to the researches described in that work upon the relation of the elevation of the general temperature and the increase of volume in certain organs — researches from which I concluded *that in all febrile diseases there is an augmentation in the size of the spleen*—I pointed out the relation between *local temperatures and paralysis*. I likewise, among other things, established in that communication that the paralysis of sensation is accompanied by a local elevation of temperature of from five-tenths of a degree to two degrees centigrade, when the sensory paralysis depends upon a material lesion of the nervous centres. I added that this local elevation of temperature of paralyzed parts 'is sometimes accompanied by a corresponding functional activity in the sudoriferous glands,' and that then sweat appears upon the surface of the anæsthized parts. This first communication to the Academy terminated with this phrase:—'The experiments of Monsieur Peter were made on private patients and on patients at the Hotel-Dieu in 1864.' In *eighteen hundred and sixty-four*,—that is to say, *twelve* years before the publication of the book of M. Séguin,—I had pointed out the variations of local temperature in paralyzed parts. Strange to say, the first publicity given to my researches upon local temperatures was made to this Academy *eleven years* prior to the author in whose interest a claim to priority has been made. I did not confine my investigations to the points which I have now mentioned. I proposed the following problem for solution:—'Does an elevation of local temperature take place in the situation where local action is going on?' Hundreds of cases slowly accumulated have enabled me to answer this question in the affirmative:—'There is always local elevation of temperature where there exists local morbid action;' and 'Wherever there is an elevation of local temperature there exists local morbid action.'

"Let me remark that I did not rest contented by stating that the local temperature was elevated under morbid conditions, but I determined the amount of that elevation. It was thus that in 1873, three years before the publication of Mr Séguin's book (in the first edition of the first vol. of the *Clinique Médicale*, pp. 644 to 648), I pointed out, among other results of my researches upon the temperatures in diseases of the thoracic organs, the variations of local temperature which accompany *l'hyperémie secrétoire* of active pleurisy, and I indicated the variations as being of 1°, 2°, and even 2°·5 in these cases.

"I go into deeper details on this subject in the second edition of the first volume of my *Clinique* in 1877, and I add still more to them in the third edition, now in the press.

"Ever since 1873 I have given public lessons upon local temperatures in the different diseases of the thorax and abdomen. In my communication to the Academy of the 10th September 1878, I not only called attention to the local elevation of temperature which occurs from the outset of pulmonary tuberculization, but I also pointed out the degree of that elevation and its variations according to the nature of the lesions.

"I have done the same in my recent communication in 1879 concerning the diseases of the peritoneum, and similar observations will also appear in my next communication to the Academy on diseases of the stomach.

"It happens, however, that certain scientific truths are not accepted by the world until after passing through two successive periods—one a period of doubt or of negation, and the other a period of acceptance. During the first period—that of doubt or negation—the affirmation of a truth is met by some with the reply, 'It is not possible; it is not *exact!*' When afterwards conviction is established, truth forces its way, that the period of acceptance is attained, others are met with who say, 'It is true, but it is not *new!*'

"When in 1878 I announced to the Academy that 'pulmonary tuberculization caused an elevation of local temperature, and that a thermometer applied to the thoracic wall would reveal this local elevation of temperature, which thus became the indication of the tuberculous lesion, some in Paris and elsewhere met me with the objection 'That is not *exact*.'

"And now, in 1879, when I inform the Academy that diseases of the abdomen, and particularly chronic inflammations of the peritoneum, raise the temperature, I am met with the objection 'That is not new!'

"But if that which I advance in 1879 is not new, it must have been observed by others than myself! Therefore that which I advanced in 1874, in 1873, in 1867, and in 1864, has additional chances of being correct. I therefore thank the gods for the distant and tardy auxiliary they have sent me.

"Now it happens that Mr Séguin of New York has published in New York, in 1876, a work of which only the title has been communicated to me It is as follows:—*Medical Thermometry and Human Temperature:* New York, 1876. It appears from the enumeration of the researches of the French physician in New York that what I discovered in France has also been discovered in America. That is something.

"But already, as far back as 1865, my learned colleague and friend Professor Broca commenced his studies on cerebral thermometry; but it was more particularly in 1873 that he applied his researches to the diagnosis of affections of the brain publicly in his clinique; and lastly, he made a communication on the subject to the Congress of the French Association for the Advancement of Science, then holding its meeting for that year at Havre.

"But what Mr Broca endeavoured to do for diseases of the cavity of the cranium, I also had attempted for those of the thoracic and abdominal cavities. I had the very legitimate ambition of introducing *localized thermometry* into daily practice, and of thus completing the work of Wunderlich, and of producing a counterpart to it in the shape of a *treatise on local morbid temperatures.* In this work, which is under progress, each one shall have his place; but until its appearance, which may yet be delayed some time, I propose to offer, from time to time, some first fruits to the Academy, and in small doses, so that they may be less indigestible.

"In reality it matters little to science, and still less to me, to know whether Mr Séguin made the same discovery as myself before me; it suffices that he has discovered it, and that thus the cause of local morbid temperatures has found in him an unexpected auxiliary, and that, one aiding the other, we may make known our discovery and cause it to be accepted by the medical world.

"Never was so much spoken about local thermometry until the publication of my communications and of the rival claims they elicited. The cause appears to me to be nearly gained; the truth, so long contested, is about to become truth triumphant. As 'no one is a prophet in his own land,' even in France, the Frenchman of Paris thanks the Frenchman of New York for his aid."

We must defer, for our proposed continuation of this review, some remarks upon the manner of taking local temperatures, a description of Broca's circular thermometer, of Séguin's "surface thermometer," and a notice of some other points in medical thermometry.

(*To be continued.*)

*Skin Diseases: a Manual for Students and Practitioners.* By MALCOLM MORRIS, Joint Lecturer on Dermatology at St Mary's Hospital Medical School, etc. London: Smith, Elder, & Co.: 1879.

IT is no small pleasure to meet with a book absolutely devoid of padding. It is certainly true that just as in dietetics, health, it is found, cannot be maintained by feeding exclusively on concentrated meats, so some degree of dilution, something more than a bare statement of facts, is needed in that mental aliment which we find in literature. It must be conceded, however, that in many standard medical works the limit in this respect is often exceeded, and a little judicious paring might with advantage, to the reader at least, be safely indulged in. Mr Morris knows how to be concise without being dry, to tell all that is necessary in few words without being obscure. There are some who deny that any progress is being made in medicine, simply because physicians cannot cure all diseases. Let such compare the volume before us with, say, the excellent work of Hillier on the same subject, published fifteen years ago, and almost identical in size, and we think they will own that very considerable advance has been made since then, not only in our actual knowledge of skin diseases, but in our means of treating them. The opening chapter treats of the anatomy and physiology of the skin, and contains an account of its structure according to the most recent investigations. It is a model of exact condensation, and is illustrated by a number of new woodcuts. The morbid anatomy of skin diseases forms the subject of the second chapter, and the relations of one primary form of lesion to another are more fully and accurately traced than in any other work. The pathology of these is lucidly described; indeed, all through the volume pathology occupies a prominent place. The classification is a full one. It resembles Mr Wilson's in having two anatomical divisions—diseases of the skin proper, and diseases of the appendages of the skin; but these, again, as in Hebra's, are subdivided into pathological classes. Zoster is for the first time separated from herpes and the vesicular diseases, and is placed among the neuroses. Mr Morris recognises a lichen simplex as distinct from papular eczema, thus doing away with the puzzling and unnecessary forms of strophulus; while he further makes milium a variety of acne punctata, to which, perhaps, no great objection can be taken. Ecthyma, always rather a vague word, he shows, is "merely a form of pustular eczema occurring in debilitated cachectic persons living under bad hygienic conditions." A remark is made in the section on eczema, of which every one who has had much to do with the management of that most common complaint will recognise the truth, that "among the local varieties of chronic eczema, the more limited the area of the patch, the more obstinately does it persist, in spite of treatment." The section on ulcers has been contributed by Mr Edmund Owen, and gives a short but clear account of these. We miss here, however, any allusion to Lister's mode of treatment—a mode both satisfactory to the patient and pleasant for those in attendance on him. Much care has been spent on the diagnostic points which enable us to discriminate the numerous diseases affecting the skin. The directions for treatment are excellent, but sometimes are too brief. Slightly fuller details on this, and in some instances greater precision, would certainly enhance the value of the book to the general practitioner. Yet we are not inclined to be captious. Mr Morris has succeeded in producing a really useful work, in the preparation of which much time must have been spent, and which we are sure will obtain the popularity it deserves.

*Glaucoma; its Causes, Symptoms, Pathology, and Treatment.* By PRIESTLEY SMITH, Ophthalmic Surgeon to the Queen's Hospital, Birmingham. London: Churchill.

SINCE the attention of ophthalmic surgeons has been directed by Leber Max Knies and others to the condition in glaucoma of the structures forming the angle of the anterior chamber of the eye, a great step has undoubtedly been taken towards the elucidation of the pathology of this affection. It appears certain, from the investigations of numerous observers in this country as well as on the Continent, that a more or less firm adhesion of the periphery of the iris to the ligamentum pectinatum can be demonstrated in the great majority of cases of glaucoma. Experiments have shown that the angle of the anterior chamber is the channel through which the aqueous humour escapes by osmosis, also that a healthy state of the tunics permits of its escape in no other way. The problem which still remains to be solved is, Whether is the pathological condition found to exist in this region the primary cause of increased tension, or secondary to, and yet serving to perpetuate it? Hitherto any explanation which has been offered has been founded on the first supposition. An inflammatory adhesion of the iris to the angle of the chamber is, however, too improbable an explanation of simple chronic glaucoma to have received much acceptation, and a host of clinical observations have been adduced which sufficiently show its untenability. Not the least interesting and valuable sections of Mr Priestley Smith's work are those which he devotes to the pathology of glaucoma. He finds by experiment that a very slight excess of pressure in the vitreous chamber over that in the aqueous is sufficient to cause the partition to bulge forwards and apply itself to the posterior surface of the cornea. This bulging forward of the lens and suspensory ligament is almost always seen when, on incision or puncture of the cornea, the aqueous is allowed to escape. In this case the pressure in the anterior chamber becomes, of course, *nil*, and yet in exceptional cases we see collapse of the cornea take the place of an advance of the partition. This, according to the author, is owing to the almost absolute want of elasticity of the sclera existing in some aged people.

Next, by a series of very pretty experiments, it is proved that "pressure on the posterior surface of the lens and its suspensory ligament, unless counterbalanced by an equal pressure on the anterior surface, arrests the escape of the aqueous humour by compressing the angle of the anterior chamber, and that this arrest occurs while a considerable quantity of the aqueous humour still remains in the chamber, and while the chamber is open peripherally, at least as far as the corneal margin, and probably rather farther." From the results of these experiments, taken along with the conditions revealed by the microscope, and the "fact that a shallow anterior chamber is a constant feature of glaucoma," the conclusion drawn is that closure of the angle of the anterior chamber, which is an essential part of the glaucomatous process, is associated with an increase of the vitreous pressure above that of the aqueous. The question next suggesting itself is, of course, What causes the increased vitreous pressure? But before proceeding, we would remark that Mr Priestley Smith is perhaps hardly justified in associating a shallow anterior chamber with *every* case of glaucoma. Cases of absolute glaucoma are seen in which this is certainly not the case, although an increased tension still exists. Whether or not there is in such cases—which, it must be admitted, are exceptional—an obstruction in some form or other at the angle of the chamber, cannot, of course, be made out during life. It is shown that, although it cannot be definitely proved, there is a great deal of circumstantial evidence which renders it probable that it is through the suspensory ligament that the waste fluid of the vitreous humour makes its escape, passing into the aqueous, and with it through the ligamentum pectinatum into Schlemm's canal. In the relaxed condition of accommodation the interval between the margin of the lens and the ciliary processes is less than during the state of increased curvature brought about by the action of the ciliary muscle as long as the lens retains its elasticity. As age advances, not only is there a diminution amounting finally to absence of elasticity in the lens, but a change of form, the most important element in which is an increase in its diameter. This may be sufficient, under certain circumstances, to seriously encroach upon the space through which the fluids from the vitreous are supposed to drain; and, according to the author, "the tendency to glaucoma depends upon an abnormal relationship between the diameter of the lens and the diameter of the circle of the ciliary processes." Now, simple chronic glaucoma is related almost constantly to commencing senility. The action of atropine and eserine in glaucoma can be explained by assuming that in a case where the lens has still retained a certain amount of elasticity, the widening of the space through which filtration is effected, is by the use of eserine rendered more constant and complete, whereas the opposite conditions follow the use of atropine. Unfortunately, Mr Priestley Smith has not had sufficient experience of the action of eserine in glaucoma to enable him to determine whether it is more efficacious in proportion to the youth of the patient, which, he rightly observes, would, *ceteris paribus*, be the case if his hypothesis were correct.

A strong point in favour of this theory is the rise in tension sometimes seen to follow simple laceration of the capsule of the lens due to the swelling of the lens substance. The rise in tension produced by the abnormal relation of lens to ligament, however brought about, tends to increase itself by the swelling of the ciliary processes, which become passively hyperæmic. The outbreak of acute glaucoma has been frequently observed in connexion with emotional disturbance, with increased afflux of blood to the head. In such cases the active swelling of the ciliary processes may be the origin of, and the unfavourable lens relation serve to further, the rise of tension.

The relation between neuralgia and glaucoma is explained in the same way. "One patient suffers for half a lifetime from intense periodic neuralgia, accompanied at every recurrence with more or less pain in the eye; not till she reaches fifty years of age does glaucoma supervene, and then it comes suddenly and in manifest connexion with one of these attacks. Another patient suffers the most intense neuralgia at frequent intervals, and still does so until his death at an advanced age, but never becomes glaucomatous. In each case the neuralgic attacks are associated with manifest ocular hyperæmia. The different effect of the malady in the two cases must presumably depend upon differences in the eyes which are subjected to its influence," etc. Proceeding to explain the action of iridectomy in glaucoma, the author says, "If the foregoing theory concerning the primary cause of glaucoma be correct, the curative action of iridectomy must involve two distinct results, viz., (1) The reopening of the angle of the anterior chamber; (2) The reopening of the space between the lens and the ciliary processes." Cases of acute glaucoma must, then, theoretically, be most favourable for this operation, as in them the closure of the first channel is recent, and by the evacuation of the aqueous humour the hyperæmia of the ciliary processes, upon which the onset of increased tension depends, subsides by the lowering of the pressure in the vitreous chamber provided for by the advance of the lens, suspensory ligament, and iris.

In chronic glaucoma the operation is less successful on the whole, because "(1) the primary obstruction, *i.e.*, the narrowing of the circumlental space, depends less upon vascular engorgement, which is reducible, than upon change in the lens, which is irreducible; (2) the secondary obstruction, *i.e.*, the closure of the angle of the anterior chamber, though probably less complete than that which occurs in acute glaucoma, has lasted much longer, and is less capable of rapid and complete resolution." Space will not permit of our following the author in all the arguments which he adduces in favour of this theory; suffice it to say, that although he has not as yet given any anatomical demonstration of the conditions of the circumlental space supposed to favour the occurrence of glaucoma, still the different varieties of glaucoma, primary and secondary, are explained in accordance with the hypothesis without any undue elasticity being demanded of it—in such a way, in fact, as to render it extremely probable that the explanation given contains at least some truth. Having so fully considered this new theory, the discussion of which occupies a large space and constitutes the chief novelty of the work before us, we cannot do more than refer to some of the other many excellent sections which it contains. The chapter on the analysis of the symptoms of glaucoma is especially good. Many of the symptoms, such as diminution in range of accommodation, iridescent vision, contraction of the field of vision, etc., were tested experimentally in a most ingenious manner, to ascertain how far they were dependent on increased pressure. The so-called opacity of the dioptric media is very properly, we think, ascribed to the cornea alone. In the first chapter some interesting statistics are given as to the frequency of glaucoma, sex most affected, most common time of life at which it occurs, influence of heredity, association with different affections, etc. The second chapter is devoted to the estimation of tension, for which purpose a new tonometer was constructed. Some of the physical experiments in connexion with this subject are open to objection, but the author does not ascribe undue importance to the sensitiveness of the tonometer. Mr Priestley Smith has given us a most valuable work on glaucoma—the best, perhaps, which has appeared since Graefe's papers on the same subject. It is a combination of experiment, clinical observation, and theory in every respect worthy of the subject—a work which obtained for its author the Jacksonian prize of 1878, and one of which English ophthalmologists may justly be proud.

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*A Treatise on Hygiene and Public Health.* Edited by Dr A. N. Buck. 2 vols. 8vo. London: Low, Marston, Searle, & Rivington: 1879.

These two large volumes form a fitting appendix to Ziemssen's great Cyclopædia; and the American editor of that work, Dr Buck, deserves great praise for devising and so successfully carrying out his plan of providing "a treatise on private and public hygiene, written with special reference to the different climates, conditions of soil, habitations, modes of life, and laws of the United States." While the audience is thus apparently contracted, the editor and his collaborateurs have given such an admirable digest of sanitary science that the work becomes one not merely of national importance, but wherever the English language is understood it may be consulted as embodying the latest investigations of English and Continental observers. Indeed, we know of no work on the subject in any language that gives such an impartial account of the progress of sanitary inquiry, and America was eminently fitted to furnish it. On this side of the Atlantic, the cradle of sanitary science, after forty years of laborious work we are already forming ourselves into separate camps on many important questions, depriving ourselves by so doing of the power of calmly and impartially estimating the value of the researches of friends and opponents. In America, on the other hand, where the first steps are being taken to watch and improve the public health, they are hampered by no prepossessions in favour of any theory; but, studying the results we have arrived at,—through our literature, and by special deputations to observe the working of our public and municipal sanitation,—they are enabled, as in the volumes before us, to give us the evidence of cool, dispassionate witnesses on many important points which are still *sub judice* among us, and exciting much discussion, and this undoubtedly constitutes the main value of the work to purely English readers. No new facts can be looked for, no fresh applications of any known inventions. The time has not yet arrived for this in America; but, with intelligent Boards of Health in New York, Massachusetts, New Jersey, Minnesota, Michigan, Maryland, Louisiana, Illinois, Georgia, Colorado, and California, a mass of valuable information is being rapidly collected and utilized, and Europe will in the next decade benefit in no small degree from the labours of so many scientific men, carrying on investigations in so many different climates and among such a varied population.

It is well known that American text-books, if monographic, are apt to assume gigantic proportions and to become compressed cyclopaedias. A single mind, however, is seldom able, in the exigencies of modern practice, to take such a Pisgah-like view of any one department, and the work, while a monument of erudition, is unwieldy; and as its very size prevents its speedy republication, its information soon becomes stale. The present treatise is open to no such objection. Dr Buck has wisely called to his aid many of those gentlemen who have in their various States been studying sanitary science in its very latest developments; and while the various chapters have thus a fulness which relieves the sombre subject-matter, Dr Buck has been enabled by the rapidity of publication to present to his readers the most recent investigations. The usual disadvantages attending the employment of various contributors the editor has not been enabled entirely to avoid, viz., the tendency of essayists to exaggerate the importance of their special subject,—to write at too great length, and also to present the same facts again and again under different headings; but on the whole we must congratulate Dr Buck on his having his corps of contributors well in hand. Twenty-two writers have furnished essays, and these are distributed, in the two volumes, on the following plan:—In the first, consisting of 792 pages, we have an introductory chapter treating of the causes of disease, and of the jurisprudence of hygiene. Then follow the two leading divisions of hygiene, comprising Individual Hygiene and Habitations—in the former of which the subjects of Infant Hygiene, Food and Drink, Water Supply, Physical Exercise, and the Care of the Person are fully discussed; in the latter, Soil and Water, the Atmosphere, and Hospital Construction. In the second volume, with its 657 pages, we have a very important chapter on Occupations, in which various writers discourse on the Hygiene of Occupation, of Camps, of the Marine, and of Mines. The rest of the volume is occupied with the second great department of the subject, viz., Public Health, which is treated of under the respective heads of Infant Mortality, Vital Statistics, Adulteration of Food, Public Nuisances, Quarantine, both seaport and inland,—a subject of increasing importance in America,—Contagious Diseases, Syphilis, Disinfectants, Village Sanitary Work, and lastly, School Hygiene. This list of subjects and their arrangement may at first sight appear arbitrary and disjointed, but the admirable index welds all into a coherent whole, and gives a unity of purpose to the work which reflects the highest credit on the editor. Appropriate woodcut illustrations are introduced whereever the text demands them; and we observe that the latest contributions in this country have been consulted, whether in the shape of text or drawing. Even the prospectus of our Edinburgh Sanitary Association is quoted. One feature of the work claims special mention, and that is the bibliographical record which accompanies each article, giving to the reader information as to the special sources of information, and affording opportunities for further investigation.

# Part Third.

## MEETINGS OF SOCIETIES.

## MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

### SESSION LIX.—MEETING V.

*Wednesday, 3d March* 1880.—Dr P. HERON WATSON, *President, in the Chair.*

I. *Dr Cadell* showed a patient, female, æt. 50, with a PRIMARY SYPHILITIC SORE on the palm of her hand, over the pisiform bone, and a squamous syphilid over her body. She had nursed her daughter during her confinement, who was at the time suffering from syphilis.

II. *Dr Foulis* exhibited a bottle containing a TAPE-WORM (*Tænia mediocanellata*) removed from the intestinal canal of a gentleman who had lately returned from Zululand. During the last two and a half years this gentleman had, at different times, four tape-worms expelled from his body. He came under his care about four weeks ago, suspecting that he was suffering from tape-worm. He was weak and very thin, and suffered from irritability of the bladder. There was no proof that he had tape-worm until a few days ago, when he found a piece of the worm, several inches long, in his bed on waking in the morning, and after this pieces of the worm came away in his stools daily. The following treatment was carried out:—A large dose of castor-oil at bedtime. The next day he had for food only a basin of chicken soup and some milk, and at night-time he took 40 minims of the liquid extract of male fern. On the following morning he took a strong aloetic aperient. In the middle of the next day this worm was expelled from his bowels. Dr Foulis stated that he had not been able to find the head of the parasite; but, judging from the smallness of some of the joints, he was sure most of the creature was expelled. It must not, of course, be concluded, because we do not find the head in the stools, that the parasite is not killed. Time alone will show if the whole worm has been destroyed. The patient stated that almost every native in Zululand suffers from tape-worm, and many Europeans in that part of the world suffer from the disease for years, and seem none the worse for it. It is generally believed that the natives and Europeans get the parasite, in its earliest condition of development, into their bodies by eating large quantities of raw or half-cooked meat, and from drinking dirty and brackish water in the neighbourhood of the "kraals" This dirty water is said to be a common source of infection both to man and beast. As showing the disgusting nature of the complaint, Dr Foulis mentioned that it is not at all uncommon for a person affected with tape-worm to find a great piece of the worm tumbling down the inside of his trousers as he is walking about, and often large pieces are found in the sufferer's bed in the morning after waking up from sleep.

III. *Dr Foulis* also showed a small, sharp-angled MULBERRY, or OXALATE OF LIME CALCULUS, which escaped from the bladder of a lady who for fifteen years had suffered from a large uterine fibroma. This lady had frequent attacks of pain and discharges of blood in connexion with contractions and irritability of the tumour of the uterus. Dr Foulis was called to see her one day, and found her suffering intense pain in her back and sides, as she expressed it. In the chamber-pot there was a large quantity of bloody urine. Supposing this was one of her ordinary attacks, he prescribed an opiate, which was gradually followed by relief. Next morning the lady, when making water, passed this calculus. She has had no pain since.

IV. *Dr Byrom Bramwell* showed a series of SECTIONS OF A SPINAL CORD which, through the kindness of Dr Hamilton, he had been enabled to make while working in Professor Sanders's pathological laboratory. Degenerated patches were scattered throughout the cord, both in the gray and white matter. The degenerated parts were unstained with carmine, and were finely granular in character. The lesion corresponded to that which Professor Rutherford, Drs Tuke and Skae had described in the year 1868 under the term of miliary sclerosis. The nerve-cells in the anterior cornua were the nervous parts most affected. The walls of the vessels were in places thickened and infiltrated with a glassy hyaline material. On looking over the preparations, Dr Hamilton had suggested that the lesion of the vessels was waxy, and on testing the point both the vessels and the degenerated patches were stained brown with iodine and rose-pink with methyl aniline. Unlike ordinary waxy staining, the rose-pink was not permanent. Perosmic acid stained both the degenerated parts of the vessels and the sclerosed patches of a uniform dull black, and in this respect also the lesion seemed to differ from the ordinary waxy condition. No other substance, however, except waxy stuff, gives, so far as is known, the iodine and methyl aniline reactions. Dr Hamilton was of opinion that the lesion was a waxy one, complicated with fatty changes. Dr Bramwell stated that if this should eventually turn out to be the case, any credit which might come from the observation would belong to Dr Hamilton. Dr Bramwell hoped to continue his observations on the subject, and to give a detailed account of the case (in its clinical and pathological aspects) to the Society at some future meeting. Dr Bramwell illustrated his remarks by diagrams made from the specimens under the microscope.

V. *The President* showed—(1) a PENIS AFFECTED WITH EPITHELIOMA, which he had removed in a patient upwards of 80 years of age by amputation under chloroform. The interest connected with this specimen was in the fact that the operation was well borne, but the patient died suddenly four days after the operation, when going on well. Had this result been attained while he was under the influence of chloroform, his death would inevitably have been called "another death from chloroform" by persons with perverted views; (2) a FOOT amputated on account of extensive destruction of skin tissue, preventing cicatrization when skin-grafting had been repeatedly tried without success; (3) a CYST OF THE BROAD LIGAMENT in a case of internal strangulation, where Dr Watson had opened the abdomen and divided two bands, within which the greater part of the small intestines had passed and become contracted. These bands extended from the tumour to the mesentery. The tumour was attached to the brim of the pelvis, and seemed at first sight to be a piece of intestine strangulated and greatly distended. On examination its true nature was recognised; its sac was then emptied by a small exploring trocar, its attachments ligatured by means of carbolized silk, and the tumour cut away. The whole operation was conducted with antiseptic precautions. There was no bleeding. The patient went on well for twenty-four hours, and then sank without any obvious cause. No dissection of the body was permitted; (4) MICROSCOPIC SPECIMENS illustrative of four subcutaneous nervous tubercles which he had removed—(*a*) from the forearm; (*b*) external malleolus; (*c*) sole of the foot; and (*d*) inner side of the patella. In all these cases but one the tumour consisted of an encapsuled blood-clot undergoing retrograde changes. In the remaining instance the tumour was a sarcoma.

VI. *Mr Chiene* communicated a NOTE ON A CASE OF DEATH DURING THE ADMINISTRATION OF CHLOROFORM, by *Dr G. Silke,* which was read by the author.

*Mr John Duncan* said that although he had not been present at a death from chloroform, he had, like others, seen cases of urgent danger similar to this. The salient point in Dr Silke's case was the definite establishment of the fact that the heart continued to beat for at least ten minutes after arrestment of the respiration, a condition which he believed to be by far the most common under such circumstances. The practical point to be considered was what line of action should be adopted in these cases. Putting aside other essential measures, pulling out the tongue, etc., our reliance must be placed on artificial respiration. Now, Sylvester's method, for convenience and efficiency, was not to be surpassed. But it must be thoroughly done. It was not sufficient merely to raise the arms above the head and then bring them down again, as was too often done. It was essential that the traction and pressure should be powerful. An assistant should seize the feet, and the surgeon, having raised the arms, should throw his whole weight into the traction. Otherwise he merely elevated the clavicles and scapulas, and hardly affected the thoracic wall. Afterwards, at a proper interval, the arms must be brought down to the sides of the chest, and the surgeon should, through them, bring his whole weight again to bear in the pressure on the thorax, so as to expel the air forcibly from the lungs. In that way a most thorough and efficient artificial respiration may be kept up for any required period, and, in his experience, with the most beneficial results; while anything short of it was not adequate to the production of that complete change of air which was necessary in these dangerous states.

*Mr Joseph Bell* had been much struck by the remarkable statement made by Dr Silke that the heart of the patient had continued to beat for ten minutes after the respiration had become embarrassed, and stated his opinion that, in such circumstances, he would have expected that recovery would have resulted. He then related a case which had lately occurred in his own hospital practice. During a protracted operation he had noticed the blood suddenly become dark, and, instantly going to the patient's head, found that breathing had ceased. Pulling forward the tongue produced no result whatever, and the face was livid, and things looked as bad as possible. Passing the forefinger of the right hand down the gullet, he was enabled to reach and actually to force open the rima glottidis, which was firmly closed. Pressure on the epigastrium caused a gasp, air rushed in, and after a few repetitions of these procedures respiration became re-established, and the patient recovered. Had a few seconds more been lost, he believed the case would have been one of death from chloroform.

*Professor Annandale* thanked Mr Silke for his paper, and congratulated him on his excellent report of the case. As is well known to members of the Society, deaths under chloroform may take place in several ways. He had seen a patient die suddenly on the first stroke of the knife, apparently from shock to the heart, as occasionally occurred before chloroform was used. He had in another case seen death occur when an operation for strangulated hernia had just been completed; the patient vomited, stoppage of respiration took place, and this was found at the post-mortem examination to have been caused by the vomited matter passing into the air-passages. Again, there was a third class of cases in which respiration ceased, and it was in some of these cases that the explanation of the cause of death was, in his mind, not yet determined. It seemed to him that there was one question of great practical importance in connexion with this subject, and it was this,—Is it possible to say with certainty that any particular person is not a fit subject for chloroform or other anaesthetic? for he was inclined at present to rank all the anaesthetics in use together. He feared that in the present state of our knowledge it could not be said that there was any such certainty, or that any special examination of a patient would discover conditions which would forbid the administration of the anæsthetic. He did not think that the explanations of the cause of death given by Mr Silke in connexion with the case reported were sufficient, nor did he think that any surgeon, knowing of the existence of these conditions, would have refused to give chloroform on account of their being present. He advocated great care and watchfulness in giving anæsthetics, but he was of opinion that death would occasionally take place during the administration of chloroform or other anæsthetics, sometimes from carelessness, sometimes from causes which, in the present state of our knowledge, he would be inclined to call non-preventable. Mr Annandale further referred to his method of operating with the patient's head dependent in cases of cleft palate, tumours of the jaw, or other proceedings in which blood was apt to pass into the air-passages.

*Dr James Carmichael* thought the Society, and indeed the profession generally, should feel indebted to Mr Chiene for advising Mr Silke to publish this case. He considered it of great importance that all these cases of death during the administration of chloroform should be recorded, otherwise we never could improve our knowledge regarding the real cause of death, or judge of the relative safety of chloroform as compared with other anæsthetics. He did not remember having observed the publication of any case of death during chloroform administration in Edinburgh since Dr Gillespie recorded a case many years ago. In the course of practice he had nearly lost two patients while under chloroform, and this on account of carelessness in administration, or rather inability to devote undivided attention to the patient during anæsthesia, which was always necessary. Both cases occurred in country practice, and in one he (Dr Carmichael) was giving chloroform and operating at the same time on a boy who required three fingers to be primarily amputated. The breathing stopped for about three minutes, the heart continuing to beat. The respiration became re-established after artificial respiration had been kept up for some time. The other case was one in which he was amputating a mamma for schirrus in an old woman of 70. A medical friend was giving chloroform while he operated, but in assisting him to tie the arteries he allowed his attention to be distracted from the chloroform. The respiration ceased, and the heart's action became very irregular, and at times inaudible. The woman was in imminent danger, and for several minutes appeared to be in a hopeless condition. Sylvester's method, however, ultimately produced a short respiration, which was followed gradually by natural breathing. It would appear that death from chloroform occurred either by syncope or asphyxia, the latter being by far the most common cause. Why this should be was not quite apparent, unless it was that the heart, by virtue of its own inherent nervous arrangements, was able to maintain its action independently of central nervous influence altogether. The importance of watching the respiration was paramount. The best means of doing this was by the aid of the three senses of sight, hearing, and feeling,—seeing the chest move, hearing the breathing, feeling the respiration, the hand or one or more fingers being between the towel and the patient's face. If, on the first indication of embarrassed breathing, the towel was withdrawn, in most cases the breathing was speedily re-established. When syncope took place the case was much more hopeless in every way.

*Mr Chiene* was much struck, at the post-mortem examination, with the great looseness of the mucous membrane covering the false vocal cords. This deserved special note in connexion with the slight difficulty experienced in effective artificial respiration. He had seen Mr Silke conducting artificial respiration, and he was thoroughly acquainted with the proper method of performing the movements by the Sylvester method. Looking back now on the unfortunate termination in this case, he thought that everything had been done that he would himself have done in like circumstances. Tracheotomy might perhaps have been performed, but the difficulty experienced was not sufficiently clear to indicate its adoption. He was much pleased that his house-surgeon had written such a clear and distinct paper on this important subject.

*Dr Foulis* said that, as one who had had a considerable experience in the use of anæsthetics, especially anhydrous ether, he felt compelled to express the opinion that this was by far the safest of all known anæsthetics. He had frequently seen patients at the very verge of death during the administration of chloroform, but had never seen any symptoms of real danger during the administration of ether, even in operations lasting from an hour to three hours and a half. Now, in the paper which Dr Silke had just read, we were informed that a strong and apparently healthy man died during the administration of chloroform. The question at once arose, Did this man die from asphyxia, or did his heart suddenly stop? We were informed that the man's heart beat for *ten minutes after respiration appeared to have ceased.* Another question immediately suggested itself—Was artificial respiration properly carried out during the time that man's heart was beating? and if so, why did the man die? Dr Silke had produced a number of statistics as to the manner of death during the administration of chloroform. We were told that a certain percentage of deaths took place at the very beginning of the operation, before a knife had touched the patient. Others had died from fright before they got even a whiff of chloroform. A number had died when fairly under the influence of chloroform, *i.e.*, when all sense of pain had been abolished. Most observers have stated that in such deaths the respiration was the first to fail, the heart beating for some time after all natural respiratory movements had ceased. Hardly a week passed without their seeing in the medical journals a report of a death from chloroform. In the description of such cases one generally read that the patient's face was observed to become suddenly pale and livid, and the pulse to become rapidly weaker. Post-mortem examination seldom told us the cause of death in those cases. It is, however, a fact of the greatest importance, and one that should never be forgotten, that in a large majority of the deaths from chloroform the heart has been observed to beat for some time after respiratory movements have ceased. Could rapid aeration of the blood be carried out in these cases, one might almost hope that some of them would be saved from death. Without doubt, rapid and perfect aeration of the blood is the best treatment in cases of approaching death from chloroform. What, then, is the best method of artificial respiration in urgent cases? Dr Foulis had the greatest faith in Howard's method, an account of which had been published in the *Lancet* some time back; and he related a case in which it was applied, to show members of this Society how efficient it is in urgent cases of asphyxia, however produced. One night, about 11.30, he was called to the country to see a lady, said to be dead or dying from apoplexy. When he arrived at the house he found the lady lying on her back in her bed. She was blue in the face; eyes half open; all muscles lax; body cold and clammy; no respiratory movements; no pulse; apparent death. He at once examined the eyes by the aid of a candle. The pupils were contracted to a fine point. He then placed his ear over the heart, and detected the click of valvular action. At the same time, asking questions from the friends around, he at once came to the conclusion that the patient was at the point of death from asphyxia. The windows were then thrown open, the patient placed flat on her back. Two pillows were placed under her shoulders, and the head allowed to fall well back. He then passed the handle of a large dessert spoon over the dorsum of the tongue right down to the larynx, and, using the front teeth of the patient's upper jaw as a fulcrum, he pressed back the bowl of the spoon. The base of the tongue and the hyoid bone were thus made to protrude under the chin. At once this action was followed by a rush of air through the glottis into the chest. This stretching of the thyro-epiglottidean folds in the manner just described opened the chink of the glottis, and the natural elasticity of the chest wall coming into play, air rushed with a hissing noise into the lungs. A few more questions rapidly asked and answered made him decide that the case was one of opium poisoning. Artificial respiration was at once carried out in the following manner;—The spoon being held by an assistant, and being kept well pressed back, as already stated, the glottis could be kept freely open. Dragging out the tongue in this case was not enough. Getting on to the bed, he placed himself across the patient in such a manner that one knee rested on the bed on either side of her body. Stooping forward, he grasped with his hands the lower part of the chest on either side, the tips of his thumbs meeting in the middle line at the lower part of the sternum. By throwing his weight forwards, and at the same time compressing the chest, the capacity of the latter was greatly diminished, and a large quantity of impure air was expelled from the lungs. On relaxing the pressure the chest wall rebounded, and air rushed into the chest in a manner delightful to observe. This method of artificial respiration was kept up for some minutes, and he was at last rewarded by seeing the blue colour of the patient's face gradually change into a reddish hue, and the heart's action increased wonderfully; but as soon as artificial respiration was suspended the livid colour of the face returned, and the heart became extremely feeble in its action. Not once had he the slightest anxiety as to the open state of the glottis. The efficient stretching of the thyro-epiglottidean folds by the spoon was something never to be forgotten. When the patient was decidedly better, for experiment sake he tried the effect of relaxing the thyro-epiglottidean folds by removing the spoon. As soon as this was done, air rushing into the chest on relaxing pressure on the chest walls caused these folds to become valved, and it was easy to see that, while some air might be expelled by pressure on the chest walls, little or none got into the chest on relaxing this pressure. On reapplying the spoon, immediately the difference in the quantity of air rushing into the chest was most marked. For sixteen hours, with occasional rests, this method of artificial respiration was kept up, and at last the patient was out of danger. He had no hesitation in stating that Howard's method saved the patient's life. The patient did not move off her back the whole time. She could not be moved, as an accident of an extraordinary nature occurred, and prevented their moving her. Soon after she became insensible—nearly two hours before Dr Foulis saw her—the servants had placed two large indiarubber hot-water bottles, each containing a gallon of hot water, on her legs. On his arrival he felt the body to see if she was cold, and to his horror he found both legs terribly burnt; in fact, large pieces of skin came away in his hands. He mentioned this case to show the great value of a particular method of artificial respiration in a case of the greatest urgency. Now, Dr Silke, in his paper, told us that the method of artificial respiration carried out in the attempt to revive his patient was Silvester's; but he did not tell us that he ascertained beyond all doubt that this method was efficient. He did not tell us that he satisfied himself that during the movements of that method air was made to pass freely in and out of the chest. But he told us that, after trying the method for some time, he opened the external jugular vein, and, with great difficulty, two ounces of *thick* black blood flowed out. This thick black blood showed that artificial respiration in this case was not properly carried out! Why, this was a case above all others in which artificial respiration ought to have saved the man's life. The man's heart beat for ten minutes after his natural respiration had ceased. Had perfect artificial respiration been carried out during those ten minutes, the man would not have died. Why was the trachea not opened at once? In ten minutes' time proper artificial respiration ought to have brought back good colour to the man's face, and the heart should have gained in strength rather than lost. The administration of anæsthetics must always be accompanied by a certain amount of danger to the patient. All agree that death has very seldom taken place during the giving of ether. Of course, it is possible to kill an animal with ether as with chloroform; but Dr Foulis had satisfied himself that it was much easier to kill with chloroform than with ether. The heart seemed to be more readily poisoned with chloroform than with ether. Never had he seen that deadly livid colour in a patient under the influence of ether which one so often saw during chloroform administration. It is their duty to use that anæsthetic in preference to any other which, while it produced perfect anæsthesia, did not prevent the aeration of the blood, and did not rapidly poison those nerve-centres which controlled the action of the heart and the respiratory movements. It was easy to poison those nerve-centres with chloroform, but it was much more difficult to poison them with ether.

*Dr F. B. Imlach* said that during his long experience in the administration of chloroform, which dated from its first introduction till he retired from practice, he had, he was thankful to say, no serious accident, although, from his method of using it, he had a certain amount of additional risk which in hospital practice is avoided; he meant the necessity of having his patient sitting in the erect position in the operating chair. One of his aims being rapidity of effect, and not prolonged effect, he always used a very large quantity of chloroform on the handkerchief, as it enabled him to keep it quite off the face, thus ensuring what is most essential, *free respiration,* whilst at the same time he was sure that the air inspired was well loaded with the vapour. He candidly confessed that he seldom made any examination of the heart or circulation, believing that little information would accrue by so doing, and it would only tend to frighten his patient. The few cases which gave him anxiety always began by the respiration stopping, and then the heart ceasing to beat. He always remarked that when this did occur it was after the first half-dozen inspirations. In such cases his first proceeding was to slap the face with his hand or a towel, and if that did not cause an inspiration he immediately opened the mouth with the fore-finger of his left hand, drew forward the tongue so as to raise the epiglottis, at the same time pressing the ribs over the heart heavily and smartly, so as both to stimulate the heart and expel the air from the chest. On two occasions only these efforts had no effect, when he instantly placed the patient on the floor, drew forward the tongue with the fore-finger, and at the same time rolled the patient half over backwards and forwards to perform artificial respiration. In the worst case he did this, he thought, for fifteen or twenty minutes, and in the other case ten minutes was sufficient to restore respiration. These were the only means employed. These two exceptional cases were the only ones in which he experienced any difficulty in administering chloroform, which he did to patients of all ages, and without any assistant.

*The President*, in closing the discussion, congratulated the Society upon the interest shown in a paper which bore upon a subject of deepest practical moment. It would have hardly been creditable had it been otherwise in what might be called the "mother city" of the practical application of chloroform as an anæsthetic. He was glad to note that in this communication such a title as "another death from chloroform" had not been adopted, but the unobjectionable title, "a death during the administration of chloroform," stated the fact, whatever might be the differences of opinion as to the cause of death in the circumstances narrated and commented upon. As to the conditions which favoured fatal results during the administration of chloroform, it was generally admitted that these were twofold, either respiratory obstruction or cardiac insufficiency. The relation of these conditions to each other had, as was well known, been a matter of dispute, some asserting that respiration was always first embarrassed, the heart's action being only secondarily affected, while others regarded the failure of the heart's action to be at all events sometimes the initial step in the dying process. These views had important practical issues. If the first were trusted to, then feeling the patient's pulse during the administration of the drug was not only unnecessary, but liable to distract the attention from the all-needful regard to the condition of the respiration, as to recognise that the pulse was gone, if preliminary respiratory arrest were the cause, was to note that the patient was in danger when life was probably extinct. Were death liable to occur from cardiac enfeeblement, then attention to the pulse was a matter of importance. Now, in this case the pulse was noted to have continued good for some time after respiration had ceased and artificial efforts had been employed for some time. The conditions affecting respiration which he had chiefly observed in the use of chloroform originating danger were copious mucous secretion excited by the chloroform vapour, vomited matter from the stomach, sweetmeats, and false teeth, in addition to the gravitation of the tongue. He had, however, seen in some cases an arrest of respiration at the conclusion of a full expiration, accompanied with spasm of the respiratory muscles; and in two cases where an epileptic attack occurred with a fatal result when the patients were inhaling chloroform, this spasm of the muscles of respiration at the conclusion of expiration was undoubtedly the occasion of death. In making traction on the tongue to relieve impeded respiration in a patient under chloroform, he thought the direction over the incisors of the lower jaw was a mistake, and that it should always be towards the upper incisors; as traction of the organ over the inferior incisors, by forcibly depressing the lower jaw, tended both to interfere with the larynx and possibly to compress the carotids, as indicated in a valuable paper of one of their members, Dr John Smith. The fatal results which occasionally occurred while patients were more or less under the influence of chloroform led naturally to the question of the prognosis of these risks. His own feeling was that it was quite impossible to gauge these risks. Chloroform could undoubtedly be administered to many cases affected with most serious cardiac disease with the best results, and there were most serious cardiac conditions in which the use of chloroform, by diminishing the effect of shock, probably diminished instead of aggravating the risk. An instructive case occurred in the early history of the introduction of chloroform, which might have inflicted irreparable damage upon its early prestige had the drug been given. The late Professor Miller was to operate upon a case of hernia in the theatre of the hospital. Sir James Simpson had promised to administer chloroform to the first case in Mr Miller's hospital practice which might occur. Professor Simpson was sent for, but was out of town. The operation was proceeded with, and at the first incision through the skin the patient died on the table. What would have been said had this been the first case in which chloroform had been employed in the theatre of the Edinburgh Infirmary? The choice of anæsthetics does not materially alter the practical confidence in chloroform. That ether should be preferred in the States of America is perhaps not to be wondered at; that mixed vapours should please the imagination of others nearer home need occasion no astonishment. He had himself had ether administered to him when a boy, and no sea-sickness he had ever experienced compared with the prostration which for a week followed the use of the anæsthetic. He had seen it given to others because less likely to make them sick, but he had not observed this result had been attained. He had been gratified by the administration of ethidene to a patient of his in the Infirmary some time since, through the kindness of the gentlemen in Glasgow by whom the practical application of this anæsthetic had been introduced. In that instance the patient was in a maniacal state all afternoon after emerging from its effects. Upon the whole, he believed he might conclude from the general tone of this discussion that there was no diminished confidence in chloroform, no increased fear in its application, no feeling that professional chloroformists were more required than heretofore to render its employment safe, and last, not least, that no apparatus was more effective or more secure than a common towel or a pocket handkerchief. It was fortunate that, at a large meeting and a very representative meeting of the Society, as it had been this evening, there was no uncertain sound to go forth to the professional world as to the views of the present generation of Edinburgh practitioners upon the chloroform question.

# OBSTETRICAL SOCIETY OF EDINBURGH.

## SESSION XXXIX.—MEETING IV.

*Wednesday 14th January* 1880.—Dr DAVID WILSON, *President, in the Chair.*

I. *Dr Hart* showed for Dr M'Watt, Royal Infirmary, Glasgow, a specimen of the entire MUCOUS MEMBRANE of the FEMALE BLADDER, which had sloughed off. The following is Dr M'Watt's account of the case:—

Mrs Roy, aged 35, came to me, December 22d, complaining of the constant dribbling away of highly offensive urine, and of severe headache. On examining patient I found the abdomen enlarged, presenting the appearance similar to a woman eight months pregnant. Patient stated that she was in good health till a fortnight ago, when the dribbling away of urine commenced. She at this time also noticed her abdomen a little swollen, and it became gradually enlarged until the time I saw her. On introducing a catheter into the bladder I drew off 82 oz. of very offensive ammoniacal urine, the withdrawing of which caused the enlargement to disappear. On microscopic examination the urine was found to contain numerous triple phosphates.

*Treatment.*—Bladder washed out twice daily with weak carbolic.

*Progress.*—*1st January.*—Patient much improved; the pulse now 94, as compared with 120 on admission. Still passes urine involuntarily.

*3d January.*—Great pain complained of in region of bladder: passed a piece of membrane 2 × 2. This considerably relieved the pain.

*8th January.*—Bladder much distended with fluid, which could not be drawn off with a catheter. In the evening, after having suffered during the day very severe pains of a bearing-down character, patient passed the membrane now shown. After passing it the urine came away very freely, thus proving that the membrane must have occluded the entrance into the urethra.

*12th January.*—Patient doing well, pulse 90, temp. 99°. Urine free from smell, although passed involuntarily.

*Remarks.*—Probably the case was one of paralysis of the bladder due to over-distension. The preparation seems to be the hypertrophied mucous membrane of the bladder. It measures 9″ × 6″. Adding this to the piece passed two days previously, viz. 2″ × 2″, the membrane would cover an area of 11″ × 8″.

II. *Dr W. L. Reid*, Glasgow, then read his paper ON A LABOUR OBSTRUCTED IN AN UNUSUAL WAY, which will appear in a future number of this Journal.

*Dr Wilson* thought the Society indebted to Dr Reid for his interesting case. It was certainly desirable that all such cases should be recorded, if only for the instruction of their younger members. The case was probably one of modified retroversion of the gravid uterus at full time.

*Dr J. H. Croom* felt indebted to Dr Reid for his lucid account of such a very interesting case. He thought the explanation Dr Reid advanced was the right one, viz., an inflammatory attack in the early months of pregnancy, binding down the uterus posteriorly. The case was thus like those described by Oldham as partial retroversion at full term. Dr Reid's case differed, however, in that the placenta was prævia, occupying the pelvic segment of the uterus, whereas in Oldham's the head lay there. The difficulty in diagnosis was very great, and Dr Reid deserved great credit for his accuracy in this, as well as success in treatment. He had not, however, the slightest sympathy with Drs A. and B., who left the patient without finding the os uteri.

*Dr Keiller* mentioned a case sent him by Dr A. Key of Montrose, where the patient had suffered from a pelvic abscess, which discharged an enormous amount of pus. Her subsequent history was that something had gradually protruded from the vaginal orifice. On examination, neither Dr Keiller nor Sir James Simpson could make out what it was. Potassa fusa, applied on Simpson's recommendation, had no appreciable effect in reducing its bulk. Ultimately he ligatured the mass, and thus removed it. Even then it was difficult to say what had been removed. The patient died some time after, and on post-mortem it was found that vaginal wall and areolar tissue had been taken away, and that the uterus was *in situ.*

*Dr Napier* mentioned a case where a very large quantity of pus was passed by a woman three or four months pregnant. She ultimately died from septic poisoning. He wished to know Dr Keiller's experience as to the amount of pus in such cases.

*Dr Keiller* mentioned a case where he opened an abscess for Sir James Simpson, where the amount of pus was very great.

*Dr W. L. Reid* thanked the Fellows for their kind reception of his paper. He would have liked some remarks on his explanation of the non-dilatation of the os uteri.

*Dr Keiller* mentioned a case of ovarian tumour complicating pregnancy, where the os uteri was still undilated, although labour had been going on for some time.

III. The *Secretary* then read Dr Matthews Duncan's paper on INTRAUTERINE PUERPERAL COAGULA, which appeared at p. 769 of this Journal.

*Dr Keiller* thought the Society indebted to Dr Duncan for his paper. It proved to them that he still retained the hard-headedness and power of work he had so often shown in Edinburgh. The paper itself was on an important subject. Cases such as Dr Duncan narrated were pretty frequent, but post-mortem examinations were rare. He had frequently inspected the uterus post-mortem, and found small clots. These he considered more dangerous than large ones, as the uterus could not contract on them sufficiently so as to expel them. When large their presence caused grave symptoms, quickly cleared up by their expulsion. He remembered one case of hæmorrhage a fortnight after delivery, where he introduced his hand into the vagina and dilated the os with his fingers. He did not like the curette in such cases. Dr Duncan had published a case where, some time after delivery, he had introduced his carbolized hand into the uterus and removed a clot. It was difficult to see, however, how this was done. The cases were interesting, and the paper instructive.

*Dr Croom* pointed out that of the three sets of coagula the first kind were avoided by the use of ergotine at the completion of the second stage of labour. He had found practically that when ergotine was given they had no clots; when not given, clots had formed. He was of opinion that placentæ, as described by Dr Duncan, must be extremely rare.

# Part Fourth.

## PERISCOPE.

### MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By Angus Macdonald, M.D.

"On the Feeding of Infants During the First Nine Days of Life" is the title of a paper of very singular merit by Dr Carl Deneke of Jena, in the *Archiv für Gynäkologie*, bd. xv. hft. 3, s. 281. The inquiry is executed in a manner peculiarly clear and convincing. After a brief historical reference to the limited literature devoted to this subject in France and Germany, special reference being made to the works of Bouchaud and Bouchut in France, of Bartsch, Krüger, and Ahlfeld in Germany, the author proceeds to explain the manner in which his own observations were conducted. This was as follows:—The newly-born child was accurately weighed when quite naked, immediately after it had been washed for the first time. These weighings were subsequently repeated in the naked condition every twelve hours in some cases, every twenty-four hours in others, to determine in what relationship the increase or decrease of the absolute weight of the child stood to the nourishment taken in. After the first bath the child was clothed, and both mother and child put to rest.

Food was not offered to the child until on awaking it cried for it, or until it made attempts at sucking its fingers. Before the child was put to the breast, or the bottle given to it, it was completely undressed and weighed. This weight, and also the moment when it began to drink, were accurately noted down. The child was then, in the presence of Dr Deneke, kept at the breast until it would drink no more, and let go the nipples or went to sleep. When the child drank only for a short time, and it was suspected that it was not fully satisfied, measures were adopted to tempt the child to drink yet more. Furthermore, the children were not put to the breast until they awakened again out of sleep, cried, and made attempts to suck their fingers, or otherwise gave such evidence of need of food as could not escape the attention of the experienced or careful mother. The weighings before and after each feeding were executed in all cases with the same accuracy as on the first occasion. If a child were artificially fed, the bottle with its contents were weighed before and after it drank, but in this case even the frequent weighings of the child as a check on the observations were not omitted. The children were fed by bottle when the mother's breast afforded no nourishment and no other wet-nurse could be got. In the artificial feeding condensed Swiss milk No. 1, diluted with twelve parts of boiling water, was used, which mixture should be about equal, on an average, in feeding qualities to the mother's milk. The weighings were executed with very sensitive balances. Ten cases thus observed are then recorded at length in tabular form, each of which cases was under observation for nine days. The tables consist of six columns. On the first column is given the day on which the observations were made; on the second, the exact periods at which the child was put to and removed from the breast during that day; on the third, the weight of the child before it drank; on the fourth, the weight of the child after it had drunk; on the fifth, the difference between the two former weights, giving, of course, the weight of milk taken by the child at each drink; and on the sixth column are given observations as to the breast drunk from, how the child behaved, whether it passed water or had the bowels moved during drinking, or whether it vomited, etc., etc. The results obtained are subsequently presented in a condensed tabular arrangement under the headings—1st, name and weight of the child after birth; 2d, the day of observation; 3d, the changes of weight of the child; 4th, the amount of milk taken each day; 5th, the minimum amount of milk consumed at each meal; 6th, the maximum of milk consumed at each meal; 7th, the average amount of milk consumed at each meal; 8th, the percentage amount of milk consumed each day in comparison to the weight of the child's body; 9th, the number of times the children were put to the breast daily. From these tables are formulated four tables of averages, with the view of answering the following four questions:—

*First*, How great is the amount of milk which an infant consumes daily?

*Second*, How is the daily amount of milk related to the weight of the child's body?

*Third*, How much does a child drink on an average at each meal?

*Fourth*, How many times should a child be put to the breast daily?

For the benefit of our readers we have reduced the grammes to English ounces.

Table I. shows that on an average a child drinks on the 1st day 44 grammes = 1·5 ounces nearly; 2d, 135 = 4·6; 3d, 192 = 6·5; 4th, 266 = 9·0; 5th, 352 = 11·8; 6th, 365 = 12·5; 7th, 383 = 13·0; 8th, 411 = 14·1; 9th, 425 = 14·5.

Table II. shows that on the first day a child consumes an amount of milk equal to 1·4 per cent. of the weight of its body; 2d, 4·5; 3d, 6·4; 4th, 8·7; 5th, 11·3; 6th, 11·7; 7th, 12·3; 8th, 13·2; 9th, 13·9.

Table III. shows that on the first day a child drinks on an average 19 grammes at each meal = 0·65 ounces nearly; on the 2d, 23 = 0·79; 3d, 31 = 1·06; 4th, 40 = 1·37; 5th, 51 = 1·75; 6th, 55 = 1·88; 7th, 60 = 2·06; 8th, 61 = 2·1; 9th, 65 = 2·2.

In answer to the 4th question, Table IV. shows that on the 1st day a child drinks on an average 2·1 times a day; 2d, 5·7; 3d, 6·2; 4th, 6·7; 5th, 7·0; 6th, 6·8; 7th, 6·3; 8th, 6·8; 9th, 6·7. As far as the duration of time is concerned which the single meal requires, it varied, when the children drank from the breast, between six and thirty-five minutes. When children drank from the bottle it scarcely ever exceeded ten minutes.

Constipation in Children is the subject of an article in the *American Journal of Obstetrics* for January 1880, by Dr J. Lewis Smith, Bellevue Hospital Medical College. It contains an elaborate exposition of the various causes, the symptoms, and the treatment of this familiar yet often tedious affection. In enumerating the various causes of symptomatic constipation, the author specially mentions congenital stenosis, partial or complete, occurring most frequently near the anus, less frequently at the sigmoid flexure and ileo-cæcal orifice; intestinal displacements, including intussusception, external and internal herniæ, twists of the intestine, and knots. Substances that have been swallowed often form the nuclei of obstructing masses, as also do substances that have been produced entirely in the system. Worms are also mentioned as exceptionally causing constipation. The various results of peritonitis, as giving rise to this condition, are spoken of and explained, *e.g.*, the paralysis of the muscular coat of the intestine from inflammatory œdema spreading to it from the peritoneum, the formation of bands and adhesions from the effused lymph forming snares for the strangulation of the gut. A still more numerous group of causes come under the head of idiopathic constipation. Deficiency in the fluid element of the excrement is not an infrequent cause, and is accounted for by too little liquid in the ingesta, too scanty secretions of the alimentary tract, too active absorption from the intestine, or excretion from the kidneys, lungs, or skin. The character of the food, apart from the amount of liquid it contains, manifestly influences the consistence of the stools. Colostrum is more laxative than ordinary milk, from its containing more butter, sugar, and salts, and hence the theory which indicates the addition of these to milk, which is constipating. Insufficiency of food, or food which consists chiefly of assimilable substances, as animal food, from which little of a coarse stimulating residuum remains in the intestine, is apt to lead to sluggishness of the bowels. Sedentary habit is probably a more frequent cause of constipation among school children than is commonly supposed. Constipation may also result from any pathological condition which gives rise either to tonic contraction or paralysis of the muscular coat of the intestine, *e.g.*, meningitis. But, independently of all these causes, cases are often met with where there appears to be a constitutional tendency to constipation. It must also be borne in mind that what is constipation in one child may not be so in another, for occasionally one does well with only one evacuation every second or third day, while the majority require daily defecation in order to maintain perfect health. As to the symptoms, constipation occurring in an obstructive disease, whether from adhesions, intussusception, peritoneal bands, herniæ, or other cause, is attended by severe symptoms, such as intense colic, vomiting, and prostration; while, if the lumen of the intestine remain pervious though narrowed, the fæces do pass by the obstruction, though slowly and with more or less difficulty. This difficulty tends to increase with a rapidity which varies much with the nature of the food, while, *pari passu*, a compensatory hypertrophy of the muscular coat of the intestine immediately above the obstruction is being developed, and the intestine below the obstruction to a corresponding degree atrophies. Hence result at a late stage vomiting, colic, distention of the abdomen, gaseous eructation, and decline of the general health. Idiopathic constipation is characterized by a gradual onset which is apt to be overlooked. It is surprising sometimes to observe how long patients live with extreme constipation, though with constant ill-health; and it is to be noted that, in a large number of fatal cases of this nature in adults that have been recorded, the complaint had its commencement in early life, at which time it might have been relieved by proper remedial measures. The author also refers to a conservative provision in the system whereby feculent matter collected in the intestinal canal finds an escape through other emunctories. The languor, furred tongue, headache, and foul breath which characterize these cases are no doubt due to absorption into the blood of some part or constituent of these noxious products. It is probable that the lungs, kidneys, and skin share in this elimination. Some useful hints in regard to treatment are given. In obstinate cases careful search should be made for a mechanical cause of obstruction, and inquiry whether symptoms of peritonitis had ever existed. The abdomen and the usual sites of hernia should be carefully looked to, and the rectum examined by the finger, a large-sized catheter, or a rectal tube. With regard to hygienic measures, the author believes that the "constipated habit" is more apt to be overlooked in childhood than in infancy, for the infant is under close observation, and the symptoms are more readily apparent than in a child over five years of age. The diet is an important consideration, especially in children. Chicken tea, beef and mutton tea, and various fruits are suitable aperients for young children, if given in moderate quantity. In the early months of infancy the salivary secretion is believed to be insufficient to convert starch into glucose, but it is probable that there is an epithelial ferment which enables them to digest starchy food. Still, seeing that glucose given in considerable quantity is laxative, the various preparations manufactured in conformity with the former of these views, such as Liebig's food and Horlick's sugar of malt, find a useful application in many cases. For children that have passed the months of infancy, coarsely-ground flour or meal, and vegetables containing saline and fibrous substances, have a laxative and stimulating effect on the bowels. The treatment by the external application of cold and by kneading the abdomen are recommended in suitable cases, where our object is to rouse the muscular walls of the intestine to contraction, as is done by obstetricians with the view of inducing contraction of the uterine muscle. The merits of the various therapeutic agents are also discussed, viz., enemata, suppositories of cocoa-nut, butter, molasses, soap cut in the form of a pencil. The galvanic current is favourably spoken of as a means of inducing contraction of the abdominal wall and of the intestine, its effects being prominently seen in cases of paraplegia. For habitual constipation the employment of the ordinary purgative medicines should be avoided; and if measures of dietetic or hygienic character are insufficient, such remedial agents should be employed as promote, or at least do not impair, nutrition.

RECTAL ALIMENTATION, AND THE INDUCTION OF ABORTION FOR THE RELIEF OF THE OBSTINATE VOMITING OF PREGNANCY, forms the subject of a paper in the *American Journal of Obstetrics* for January 1880, by Dr William W. Potter of Batavia. The author's object is to show that rectal alimentation and medication is the most powerful therapeutic means at our disposal for combating a case of persistent vomiting of pregnancy, but that cases do unquestionably occur where the mother's life demands the suspension of pregnancy. In favour of this position a detailed account of a case observed by the author is given, in which, after failure with other means, including rectal alimentation, success followed induction of abortion. In a comment on the general subject the author suggests a cause which he believes would apply to many of the severe cases of this malady. He admits that in the majority of instances the nausea and vomiting are undoubtedly reflex phenomena, but thinks that, when to these is superadded a pre-existing catarrhal gastritis, a serious condition like that described would result. Impoverishment of the blood disqualifies the gastric fluids, and the inanition of pregnancy, so frequently the precursor of the more serious stomachic disturbances, may thus become a potential factor in the causation of the morbid condition in question. The treatment which the author recommends in these urgent cases is strict avoidance of administering anything by the stomach, but free administration of aliment per rectum. In support of this method he suggests the idea that a kind of retrostaltic action of the intestines is brought into play, whereby nutritious materials are attracted into the small intestine, and that digestion takes place there in a precisely similar manner to that which follows buccal ingestion. He suggests the possibility that this tendency to retrostaltic action may have been specially developed in cases where chronic vomiting has existed, and this fact would indicate the singular adaptability of such cases to rectal feeding. Though fully appreciating the extreme value of this method of treatment, the author is disposed to deny the assertion that, under the careful and systematic application of rectal alimentation, artificial abortion for the relief of gravid nausea can be banished from practice, *even as a last resort.*

THE VALUE OF DISINFECTING INTRAUTERINE INJECTIONS is the subject of a short paper by Dr Hofmeir, in No. 5 *Centralblatt für Gynäkologie*, 1880. The author objects to needless employment of intrauterine injections as likely to be dangerous, and supports his view by reference to 260 normal cases in which intrauterine disinfecting injections were used, and of whom 42, or 16 per cent., were the subjects of inflammatory processes in connexion with the genital organs; whilst of 249 cases treated without injections only 19, or 8 per cent., were so affected. Of the 42 cases 8 were seriously affected, and of the 19 only 1. The author, however, holds that if, during the labour, fermentation and putrescent processes have been started, as evidenced by the formation of gases in the uterus and fever in the patient, disinfectant injections are not only not objectionable, but are urgently necessary, and give excellent results. The strength, however, must be considerable, so that the injection shall be slightly caustic. Dr Hofmeir recommends a solution of carbolic acid, 1 in 20 of water, to be employed in such cases, and maintains that he has seen excellent results from this. The author recommends the same treatment to be adopted after stinking abortions and such like conditions.

A CASE OF LAPARO-ELYTROTOMY WITH SUCCESSFUL RESULT is recorded in the *American Journal for Obstetrics* for January 1880, by Dr Walter H. Gillette of New York. The patient, a native of Scotland, was 4 feet 4 inches high, with bones in a well-marked condition of rickets, but she was in a vigorous state of health. When first seen by Dr Gillette she had been in labour for a week, and the membranes had been ruptured for 18 hours. On examination the fœtus was found to be dead and decomposing. The inferior strait of the pelvis was capacious, but the inlet narrowed to 1½ inches in its conjugate. The cephalic extremity presented, and the os was dilated to the size of a silver dollar. In consultation with Dr H. D. Nicoll and Dr S. B. W. M'Leod, Dr Gillette determined that the woman should be delivered by laparo-elytrotomy, which operation was accordingly proceeded with. After making the usual incision on the right side, two vessels only required to be ligatured and one twisted, and the hæmorrhage was not severe. A sound passed into the vagina was made to project at the incision, and by cutting down upon it complete communication was made with the vagina. Access was thus obtained to the os uteri, which was found rigid and hard, resisting every attempt to dilate it, so that it required to be notched by scissors. Forceps was attempted, but owing to the spastic rigidity of the anteverted uterus, the second blade could not be applied. Version was secondly resorted to, but was also found impossible. Craniotomy was then performed, with the view of permitting of version being completed, but this also proved unavailing, so great was the contraction of the uterus. Lastly, the cephalotribe was applied, the presenting leg pushed up, and with the aid of the cranioclast holding on the scalp, delivery of a decomposing fœtus was completed. The uterus contracted at once, and there was no serious hæmorrhage. The wound in the flank was stitched with silver wire and dressed with adhesive plaster, with cotton wool over all. The patient did well until the fifth day, when the wound took on a sloughing action, but it ultimately healed well by granulation under the application of antiseptic poultices. While remarking on the operation of laparo-elytrotomy as contrasted with Cæsarean section, the author points out that it is free from most of the dangers of the latter, yet presents but few of its facilities of performance. Of the eight cases on record in which this operation has been performed, four mothers and six children were saved; and when it is remembered that, of the cases which proved fatal to the mothers, in one the operation was performed in a moribund woman entirely in the interests of the fœtus, and in a second death was not attributable to the operation, the results, as obtained from these limited statistics, are undoubtedly superior to those of Cæsarean section.

THE DIFFERENT METHODS OF ARTIFICIAL RESPIRATION IN THE CASE OF ASPHYXIATED NEWLY-BORN CHILDREN is the subject of an important paper by Carl Behm in *Zeitschrift für Geburtshülfe und Gynäkologie*, bd. v. hft. i. s. 36. The subject has been investigated by Dr Behm in a series of experiments, the results of which are given in a series of tables along with the paper. The author begins by stating that the three essential requirements in resuscitation of the asphyxiated child are — 1. To secure complete ventilation of the lungs; 2. To stimulate the flagging circulation; 3. To remove aspirated bodies from the air-passages. A method of artificial respiration which claims to fulfil the requirements of the conditions involved ought to satisfy these three requirements as completely as possible. He then goes on to show that since Schwartz, in 1858, first directed attention to the importance of the subject, various authors have lauded the virtues of their special methods, and that no attempt has been made to test the comparative values of the various proceedings. He further maintains that it is impossible, from want of a sufficient number of cases under exactly similar conditions, to succeed in making a comparative estimate of the various methods by clinical experiment. He therefore holds that the most appropriate method is to try the effect of the various plans on the dead body. This is the more easy as they are all essentially of a mechanical nature. The change in tissues resulting from the death would be alike for all methods, and therefore is not an objection to the practicability of the attempt. The following is the account of the method followed in attaining a comparative estimate of the value of the various methods. The trachea of a child's body was carefully dissected out, and a small canula fastened into it air-tight, which, by means of a gum elastic tube, was connected with a Waldenburg's pneumatometer. The tube must have sufficient length to permit the execution of the methods without shaking the apparatus. In this way it was tolerably easy to determine the variations in pressure between the inspiration and respiration in connexion with each of the various methods. Whilst Dr Behm practised the particular method, a colleague marked the position of the mercury. In the tables attached to the original paper the values attained in the experiments are put together. The author maintains that the experiment proposed has at least two great advantages over the clinical. 1. Since all methods were each time treated on the same body, the different results could only arise from difference in the manipulations that came into action in the methods. 2. By the pneumatometric estimation, the results obtained possess an objective value, especially as the experiment was not valued until I had practised the manipulations of the methods accurately according to the rules of the authors. The author then passes in review, in historical order, the various methods of resuscitation that have been recommended, observing that three methods, viz., the catheterization of the air-passages, the faradization of the phrenic, and Woillez's method, he has been unable to put to the experimental test. It may interest our readers to know that the Woillez method consists in the somewhat extraordinary process of inserting the body of the asphyxiated child up to the neck in a cylinder of tin-plate, the bottom of which is hermetically sealed, and the top of which is fitted by a special apparatus air-tight to the neck of the child. With the interior of this cylinder a caoutchouc tube communicates, and to this tube is attached a bellows. By acting on the bellows the air in the iron cylinder is subjected to alternate rarification and condensation. During each period within which the air in the cylinder is rarified a strong inspiration takes place, while when it is condensed a powerful expiration is produced. The author then proceeds to a lengthy analysis of the various methods, and to estimate their separate values with special reference to his method of testing their results. Great importance is placed by Dr Behm upon the use of catheterization of the air-passages with the view of sucking out any foreign matters that are lodged in them, and for forcing pure air into the lungs. He discusses at some length the advantage of this method, and combats the objections that have been urged against it. He prefers the use of a syringe both for aspirating the foreign bodies from the air-passages and for forcing in pure air; but he thinks an elastic catheter is better and safer for introduction into the lungs than any form of metallic instrument, the canula of Ribemont, bent with careful appreciation of the curve of the air-passages in frozen subjects, not excepted. An advantage worth noting, claimed for the syringe over the mouth as a means of ventilating the lungs, is, that thereby the risk of tubercular infection is avoided. Reference is here made to the case recorded by Hubert Reich, where a phthisical midwife appears to have infected twelve children with tuberculosis in the course of thirteen months.

The author places much confidence in an ingenious double syringe invented by himself. This double syringe is made up of two separate syringes, capable of containing thirty ctm. They are so joined together that their pistons may act either together or separately. Each syringe ends in two small canulæ, the inner two being joined together by a common connecting piece. This connecting piece again bears at its further end a small canula, which is so constructed as to direct the action of now the one and now the other of the syringes into the air-passages of the child through an elastic catheter, into the lumen of which it is inserted. The action of the syringe is so arranged that, by the turning of a double-bored stopcock placed in the connecting piece, one or other of the syringes may be readily put in connexion with the elastic catheter. Then, on drawing up the pistons and applying at the same time the index finger to the open canula of the proper syringe, the one syringe may be filled with air or other matter from the air-passages of the child, and the other with atmospheric air. Then, on turning the stop-cock so as to shut off the communication between the first syringe and the catheter, and to open that with the syringe containing pure air, and at the same time applying the finger to the free canula of the other syringe and pushing home the pistons, the pure air is forced by the one piston into the lungs of the child, and the impure air and other matters expelled from the other piston through its free canula. The advantage of having the syringe so arranged that the pistons may act separately as well as conjointly, is seen in the fact that one of them may be used for several strokes in succession to suck out from the air-passages any foreign matters that may be contained in them. The author claims for his syringe the further advantage that it is entirely free from the complication of valves.

He finally formulates his conclusions in the following propositions:—1. The Schüller method cannot be recommended in the case of the newly-born on account of its feebleness of action. (This method consists essentially in forcibly pulling upwards and outwards the lower ribs, and then depressing them, in imitation of natural respiration.) The faradization of the phrenic and Woillez's methods are impracticable, on account of their requiring apparatus difficult to obtain, and still more difficult to move from place to place. 2. The Marshall Hall and Howard methods effect only expirations, are therefore specially suitable for the removal of foreign bodies from the air-passages, especially the Marshall Hall method, which still further favours, by the position of the child in expiration, the flow of fluids from the mouth and nose. 3. The Sylvester Paccini and Bain methods give the greatest differences between the pressure of inspiration and that of expiration, and establish the most manifest variations in pressure both towards the negative and positive side. They will best furnish the lung with air and stimulate the action of the heart 4. The Schultze method satisfies all three indications of artificial respiration at once, but in regard to the individual points is weaker than those already named. It has the great disadvantage that the children rapidly become cold while it is practised, and it is therefore less suited to stimulate the flagging circulation. 5. The catheterization with the elastic catheter and the double syringe likewise satisfies all three indications at once, and more surely than all other methods, especially so far as regards removal of foreign bodies. It is best, therefore, in the case of deeply asphyxiated children, who, as a rule, have made repeated premature efforts at breathing, and have aspirated large quantities of liquor amnii, vernix caseosa, mucus, blood, and meconium into their air-passages, to employ at once, without loss of time, the catheter and double syringe. If one have not these by him, it will be best, as Professor Skrzeczka recommends for the dead drunk, to make quickly some expirations according to the Marshall Hall method, in order then to proceed to Bain's method, which furnishes with the greatest activity the atalectic lung of a newly-born child with air. If the child has once come to itself somewhat, one will obtain better results, as in the slighter cases of asphyxia generally, by practising Schultze's method. At the end of the paper are given, as already remarked, tables showing the effects of the various methods when practised on the dead body, but our space will not allow us to record them.

## MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

JABORANDI IN DROPSY.—The *Boston Medical and Surgical Journal*, 15th January 1880, contains a report by Dr F. H. Cilley, of Barnet, U.S., of the following interesting case:—Mrs H., aged 55, who had had dropsy during the last five years, with valvular disease of the heart, on 18th June had severe dyspnœa; she had passed no urine for twenty-four hours, and had general anasarca. Half-drachm doses of the fluid extract of jaborandi were given every four hours. Its effect was manifested in half an hour; within eighteen hours she passed sixteen pints of urine; also profuse perspiration and salivation were induced. The dyspnœa was at once relieved. A second attack was relieved by the same treatment. The patient has had tonics during the last four months, and is now in good condition.—*Medical and Surgical Reporter*, 21st February 1880.

DR R. HARVEY REID ON THE ADMINISTRATION OF NITRITE OF AMYL.—To my present knowledge, and so far as I have been enabled to secure the literature published on the use of the nitrite of amyl, I have failed to observe a single instance where this salt was given internally for therapeutic objects in the human economy. But in following up the conclusion arrived at by Granger in his physiological experiments with this drug, that it acted on the hæmoglobin, reducing the capacity of the red blood globules for carrying oxygen, and thereby arresting the metamorphosis of tissue, I arrived at the conclusion that, to get the fullest and most permanent effect of the drug, it should be given internally through the stomach; and to demonstrate my theory I commenced to give it internally to a coloured girl, on the 7th of March 1875, who was under my care in the mission hospital, and was a subject of epileptic convulsions, deriving from it the most happy results, and effecting a permanent cure so far as I had any knowledge of the case, which was for nearly a year afterwards. From that time to this I have given it without hesitation internally where I thought it was indicated, and have yet to observe any bad results from its use. The nitrite of amyl is very easily taken when dropped upon a lump of loaf sugar, in which way a patient can take it without the least difficulty. My experience in using this drug is first to initiate the patient into its use by allowing him to inhale it, then commencing with small doses internally, and increasing until the desired effect is obtained, provided its use shows a beneficial action upon my patient. I have given it by inhalation for hours at a time, at short intervals; and when used internally, I commence with one-drop doses, or, if in children, one-half-drop doses, and have gradually increased the dose to 10 drops in an adult, without gaining any unfavourable symptoms, but, on the contrary, receiving a decided benefit, especially in the majority of cases in which I have used it for epilepsy, infantile convulsions, asthma, and pertussis. We are pressed by the limited experience we have had in the use of this drug to the legitimate conclusion that it deserves a more prominent place among our healing nostrums than it has ever been allowed to have; at least, it should receive a fair and impartial trial in those classes of cases in which it is indicated by its physiological action. — *The Detroit Lancet*, February 1880.

SLIPPERY ELM (*Ulmus fulva*) SUPPOSITORIES IN PILES.—These are recommended in the *Medical Herald* by Dr E. J. Kempff. He observes that suppositories made of powdered slippery elm bark and warm water (sufficient of the latter to make a sticky mass), medicated with fluid extract of belladonna or ergot, recommended themselves in rectal diseases and for piles, enlargement of the prostate gland, or uterine fibroids. They become slimy, dissolve gradually, and medicate very slowly.—*Medical and Surgical Reporter*, 21st February 1880.

MANACA.—Manaca is a powerful drastic, and named by Pohl, *Franciscea uniflora* (Scrophularineæ—Salpiglossideæ) and named by Sprengel, *Schwenkfeldia lineria*. The first opportunity of seeing and trying the manaca by myself was in 1867, when I was a resident of South America, at Oannuoo, in the Amazon country. I found the manaca to be a shrub with alternate oblong acuminate leaves, flowers solitary and terminal, of a penetrating odour. Its name is not alone manaca, but it is also known by the names of gerotaca, camgauba, manaca des Jùso, and in Para is mostly called mercurio vegetal. The whole plant is used for medical purposes, "not the root alone," as stated by Dr Hansen. The plant has a bitter, nauseating, sharp taste, as has also the root, and is one of the most important purgantic drastics which Brazil has furnished up to this date. I have used manaca in my practice for one year, and would say I found it to be an emeto-cathartic, diaphoretic, diuretic, alterative, and a powerful anti-syphilitic. It is prescribed as a specific in snake-bites on account of its specific action on poisonous matter in the blood. It is also used as an eliminant of other morbid matter by the skin and kidneys. The dose of the powdered root is five to ten grains three or four times a day. I have used a decoction of root and twigs, with the same results from each, and gave ℥ss. three times a day in rheumatism and various skin diseases, with satisfactory results. After taking two or three doses of the above remedy, the patient will complain of pains about the head, profuse perspiration, and a severe itching of the skin. The green plant (bruised) is used in Para for external application to sores of various descriptions, especially those of an indolent character. The name of mercurio vegetal is given to manaca on account of its employment in affections of the liver and in other diseases in which mercury is indicated. (By A. Eddmon, M.D., Tontogany, Ohio.)—*New Preparations*, December 1879.

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## OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

The rise of American dermatology formed the subject of Dr Duhring's address to the American Dermatological Association last year, when he occupied the presidential chair. This contains an enumeration and short critique of the many works and papers which have from time to time appeared in America on the subject of skin diseases, and is valuable for reference. He mentions that Thacher tells us that syphilis first made its appearance in Boston in 1646. "In this year these virtuous people" (the early settlers) "were much grieved by the discovery of a disease in Boston with which till then they were entirely unacquainted, and which, the venerated Winthrop in his journal says, raised a scandal upon the town and country, though without just cause. This proved to be the lues venerea. It originated with the wife of a seafaring man, who after childbirth was affected with ulcerated breast. Many persons were employed to draw this woman's breast, by which means about sixteen persons, men, women, and children, were affected with this odious disease." He further adds that they were unable to control the disease until a young surgeon from the West Indies arrived, who "soon performed a cure." An example of the extent to which mercury was abused in the treatment of syphilis as late as 1800 is given in an essay by Rousseau on absorption. In speaking of the susceptibility of individuals to salivation, he says:—"Dr Barton assured me that he was salivated by only going several times in a close room where one of his patients was in a profuse salivation produced by the mercurial frictions." What must have been the patient's condition?—*New York Medical Journal*, November 1879.

Treatment of Warts.—Bulkley notes that these may be satisfactorily removed by the dermal curette. This spoon-shaped instrument must be tolerably sharp, and by a careful sort of cutting movement round the wart it may be removed bodily, leaving a slightly depressed surface which bleeds a little. As this heals, perfect epidermis is formed, with no scar, and the wart generally remains absent. The little operation is hardly at all painful, and can be well employed in the case of children.—*Archives of Dermatology*, October 1879.

Incomplete Vitiligo.—Leucoderma or vitiligo, when once developed, remains usually permanent, but Atkinson describes an interesting case in which the deficiency of pigmentation showed fluctuations. The affected person was a dark mulatto prostitute, aged 25, in good health, and who had never had syphilis. The lighter areas were not white, but much paler than the colour of the skin on the rest of the body, and these were bordered by the more intensely pigmented margins, gradually shading off into the natural skin colour beyond. She asserted that the patches "came and went," and this was confirmed by the alterations observed on the hands. The decoloration began on the backs of the hands, was well marked there; then the normal hue was regained, again lost in patches, and at the last date chronicled had been a second time quite restored. The whole body, with the exception of the face, scalp, and back, was irregularly, though symmetrically, invaded. The hairs on the affected areas did not participate in the loss of colour. Atkinson compares this case of acquired incomplete vitiligo to one of congenital, partial, or semi-albinismus related by Captain Burton.—*Archives of Dermatology*, October 1879.

Epithelioma treated by Marsden's Paste.—Bulkley recommends this paste, which consists of equal parts of dry powdered arsenious acid and powdered gum acacia, with a drop or two of water, as preferable to excision in many cases. First, because by this means, in timid persons who fear the knife, early treatment is possible. Again, in his opinion, the cure is more certain, and the cicatrix more pliant and perfect, as this caustic destroys only the epitheliomatous structure. He lays the paste thickly over the surface, but never to a larger extent of surface than one square inch, to avoid arsenical symptoms, covers with packing of cotton wool, and then poultices every two hours during the day, and applies a single one at night, well covered with oiled silk, till the slough separates and the granulating wound beneath heals. — *St Louis Courier of Medicine*, October 1879.

Tattooing of Nævi.—Sherwell exhibited a patient, at the American Dermatological Association, affected with port-wine mark, which had been much improved by his plan of tattooing. This consists in pricking the surface freely with a bundle of needles dipped in carbolic or chromic acid, of a strength of from 25 to 40 per cent. The surface is then dried, sponged off with alcohol, and a thick layer of collodion applied. The surface had been tattooed twice, at intervals of months. The mark had nearly quite disappeared, and it was proposed to remove the remaining discoloration by one more operation. The operation is neither painless nor instantaneous, and does leave some scar. In the discussion which followed, the opinion expressed was, in general, favourable; and it was mentioned by several speakers that Mr Squire's plan had been a complete failure in their hands.—*Archives of Dermatology,* October 1879.

SYPHILITIC ANALGESIA.—Bulkley remarks that a loss of sensation of pain on pricking the skin is, as pointed out by Fournier, of not infrequent occurrence in the secondary stage of syphilis. Fournier, from his experience at the Lourcine hospital for female venereal cases, dwelt specially on its appearance in women. Bulkley finds it also in males, though less frequently, perhaps because of their stronger nervous organization. It is not always present, but he thinks it rather belongs to those cases in which a profound impression is made by the syphilitic poison.—*Archives of Dermatology,* July 1879.

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## PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S.E.

SYPHILOMA OF BRAIN, CAUSING A PERFORATION IN SKULL-CAP; ON TAPPING OVER THIS, THE LEG OF THE OPPOSITE SIDE THROWN INTO CONVULSIONS.—In the *Journal of Mental Science* for July 1879, Dr Clouston thus describes this interesting case:—W. S., admitted 27th July 1878, æt. 46, died 28th August 1878. This gentleman had been a wanderer on the face of the earth, and had the marks of syphilis. On post-mortem examination there was found to be an erosion penetrating the skull-cap, making a hole through it of an oval shape, $\frac{9}{16}$ inch long and $\frac{5}{16}$ inch broad, at the summit of the parietal eminence on the right side. That point had, during life, been the seat of great tenderness on pressure; and, what was a very remarkable symptom, when this point was tapped the left leg was thrown into a state of convulsion which lasted about five minutes. The dura mater was adherent at the seats of the absorption of bone, and was found to be about a quarter of an inch thick in some parts. On exposing the brain there was seen a hard gummatous tumour in two nodules, the size of a pigeon's egg, which had caused great irritation and softening in the brain substance round it. Dr Clouston had never seen a syphilitic tumour where the brain substance in the neighbourhood was sound, while he had often seen perfectly normal brain tissue surrounding fibrous and even hard cancerous tumours. It involved the supra-marginal convolution, and also to some extent the ascending parietal. The angular gyrus was also involved. The patient suffered from vertiginous and epileptic attacks. The mental symptoms were chiefly depression, confusion, irritability, and loss of memory, with mental enfeeblement. The bodily symptoms were restlessness, an unsteady, shuffling gait, left arm subject to twitchings, slight left hemiplegia in leg, with partial left facial paralysis. He died of a congestive attack.

SYPHILIS AND MENTAL ALIENATION.—Dr Julius Mickle has a contribution on this subject, with some illustrative cases. With reference to general paralysis, his views, he states, are somewhat analogous to those of Dr Fournier, to the effect that syphilitic disease may simulate, but not produce, true general paralysis of the insane.

CASE I.—A gunner. Admitted 14th January 1879, æt. 29; service ten years; single. There was a clear history of a syphilitic sore in September 1877, followed in three months by a rash over the trunk; that he suffered much from cranial pain, for which he went into hospital in January 1878 (about which time his hair came off), and remained till March; was readmitted for the same symptom in April; was tried in May 1878 for insubordination and absence under the influence of drink; imprisoned from May till October, but for two or three months previously to the latter date he felt very ill, became delirious, and had severe exacerbations of cranial pains.

*Mental State.*—He said he could write poetry. In one part, the wording of the MS. seemed to imply that it was written by "the Everlasting Son of the Most High God." He was treated by the combined iodide of potassium and perchloride of mercury. After four months of this treatment he was discharged recovered.

CASE II.—J. S., private, Army Hospital Corps; single; æt. 37. Admitted 23rd January 1878, after eighteen years' service, of which three were spent at Mediterranean stations and six in India. The causes assigned were "hereditary predisposition, sunstroke, and constitutional syphilis. In 1863–4–6 he had been in hospital for constitutional syphilis; again in 1873 for ostitis and periostitis. In June 1875 he was said to have had sunstroke.

*On admission.*—Evidences of syphilis apparent; pupils small, irregular, sluggish. He had suffered from pain in the head off and on "since the sunstroke," he said; was not kept awake at night by it. Dementia was extreme, with loss of memory, but without hallucinations, illusions, or delusions. Was treated with iodide of potassium and mercury combined.

*8th June.*—Much that passed during the height of his attack is now a blank to him, but his memory is good for simple matters relating to his life prior to his illness. His attack began, he says, with severe pain in the head, followed by dizziness and insomnia; then he "became bad," and recollected but little of what ensued, but he heard "a buzzing in the ears," and lost the senses of taste and smell, which have since returned in a gradual manner. The iodide of potassium to be increased to grs. xx. thrice daily.

*Remarks.*—The only doubt was whether the sunstroke could account for the mental derangement in this case. As Dr Buzzard has observed, symptoms due to syphilitic nervous disease are often assigned to sunstroke. In this case, Dr Mickle thought, there was somewhat diffuse cerebral pachymeningitis, together with syphilitic disease of many smaller arteries of the brain.

CASE III.—O. D., private, 45th regiment. Admitted 11th May 1875; æt. 37; service nineteen years. First attack, previously treated in India from December 1874. The attack was attributed in part to climatic influences. History of syphilis and convulsive seizures, and periostitis. Had been suicidal; subject to hallucinations of sight and hearing, and delusions as to conspiracies against him; while perception, memory, and judgment were impaired.

*On admission.*—Had syphilis in 1871. Suffered at present from nocturnal bone pains and tenderness over several bones. Depression and melancholia existed, but the hallucinations were in abeyance. Treated with iodide and bromide of potassium and carbonate of ammonia.

*30th May.* — Had delusions about the attendants, and was yesterday considerably excited. Complained of severe cranial pains.

*31st May and on 2d June.*—Had fully-developed ague-like attacks, with vivid delusions. In July and November he was excited and full of delusions. Subsequently to February 1876, at which time he had still delusions, he gradually improved, and was discharged recovered on 27th September 1876.—*Journal of Mental Science*, October 1879.

[It is interesting to note that this very obstinate case recovered without the administration of any mercury.]

# Part Fifth.

## MEDICAL NEWS.

UNIVERSITY OF EDINBURGH.—The matriculation returns for the past year, 1879, have now been made up, and show a very satisfactory increase in all the Faculties over the returns for 1878. The aggregate number of students who matriculated during the year was 2856, being an increase of 239 on the register of the previous year. Of these fully one-half belong to the Faculty of Medicine, the number of students who matriculated in that Faculty during the year being 1442, thus showing an increase of 149. The gradually increasing ratio of increase in this medical school is probably due in a great measure to the wide range of supply of students to which India, our colonies, and even foreign countries, largely contribute. The entries show that 622 of the students are from Scotland, 492 from England, 25 from Ireland, 89 from India, 174 from the different British colonies, and 40 from foreign countries. The proportion of students who took degrees is about 1 in 11. During the year one fellowship of about £240 and one scholarship of about £65 have been added to the prizes to be gained by competitive examination in this Faculty. The new buildings for the Medical School have been vigorously pressed forward during the past year, so that there is every prospect of some portion of them, especially the Department of Anatomy, being ready for occupation at the beginning of the winter session 1880–81.

Disturbances of Vision produced by Poisoning by Unsound Meat.—Professor H. Cohn of Breslau (Knapp's *Archiv*, ix. 2) has observed two instances of poisoning distinctly referable to the eating of game-pie and pike which had been kept too long. The symptoms were in both cases severe gastric irritation, with vomiting and faintness, inability to swallow, and paresis of accommodation. In the first case a landlady had attempted to preserve the remains of a hare-pie of which a number of her customers had partaken with impunity. On tasting a small portion of this some time afterwards she was seized within an hour with the most violent vomiting and other symptoms of poisoning. The next morning she was unable to read, although she had been able to do so the day before. She was first seen by Cohn nine days afterwards, when the accommodation was found to be almost completely abolished. She recovered after a month. In the second case three members of a household numbering six in all, were poisoned, three escaping, although it was ascertained that the symptoms came on after eating pike, and could be due to nothing else. All had, however, partaken of the same dish. On careful questioning it was found that the dish contained two fish, each of which was cut into three pieces, and it was conclusively shown that only those who had eaten the one (which was not perfectly fresh) were affected. In one the paresis of accommodation was the only symptom; the other two had severe gastric irritation besides. In one only the accommodation had not returned when last seen six weeks after the occurrence.

Although a number of instances of fish-poisoning are on record, it does not appear that this curious local paralysis has been noted, though, from remarks made in some instances, it appears probable that something similar existed. The other symptoms have always been the same. Cohn is inclined to ascribe it to some particular form of decomposition.

The *St Louis Courier of Medicine* has note of experiments by Professor Maas on the absorbing powers of granulating surfaces. The results of these experiments will be specially interesting in the present day of antiseptics. 1*st,* Professor Maas discovered, by experiments on men and lower animals, that such substances as atropia, morphia, pilocarpin, etc., are as readily absorbed by granulating as by fresh surfaces; 2*d,* That watery solutions are most readily, and alcoholic least readily, absorbed; 3*d,* That an eschar produced by chloride of zinc is the best protective against absorption—in other words, is the most impenetrable. Hence, possibly, the protective power of chloride of zinc against sepsis.

In the same journal is a most startling article on "Ice as a Vehicle in Causing and Transmitting Disease." The author considers that he has traced typhoid fever to infection by this source. He refers to the fact of the ice used being often drawn from canals, ponds, etc., in the neighbourhood of large towns, which are sure to be more or less contaminated with sewage. This should be a warning to all to ascertain, if possible, from what source their ices come, seeing there are plenty of such places as are referred to around this city.

GRATEFUL PATIENT. — A correspondent in Dakota Territory writes: "Your interesting and o'er-true leader in the number of the *Record* for January 3, 1880, on 'The Doctors' Bills,' recalls to my memory a rather amusing experience I had during the earlier years of my practice. I was called at midnight to visit a gentleman who had just returned from a late dinner, where he had succeeded, by hasty eating, in lodging a large fish-bone in his throat. I provided myself with an emetic, a pair of œsophagus forceps, and other paraphernalia designed to give him relief, and hurriedly repaired to his room. I found him pacing up and down the floor with a look of intense distress and anxiety, occasionally running his fingers down his throat and gagging. He told me, in tones of despair, that he thought it was all up with him, but begged me, if the least glimmer of hope remained, to proceed at once in my efforts to relieve him. He extravagantly declared, in the generosity of spirit begot by the vividness of his fears, that he would give a million dollars to have that fish-bone removed. I assured him that such cases were frequent, and ordinarily not attended with much danger, before proceeding to carry out measures for relief. His fears underwent some diminution on the strength of this, and he then declared that fifty thousand dollars would no more than repay the skill and art required to extricate the unwelcome intruder. I smiled, and proceeded to introduce the forceps, but after several attempts failed to grasp the bone. His fears again induced him to mention a fabulous sum as the meed of the service that would expel the object of his terrors. I then gave him the emetic, its depressing effect causing his generosity to rise again, barometric-like, to a very high pressure. In a little while the emetic disburdened him of the greater part of his dinner, and with it up came the fish-bone. He gave a sigh and a look of relief, and, solemnly looking towards me, said, 'Doctor, I wouldn't have that thing in my throat again for five dollars!' My fee eventually resolved itself into the 'valuable experience' that the occasion afforded me."—*New York Medical Record.*

In this city there is such a premium on medical pauperism that the latter is becoming respectable. It is considered a smart thing to dodge into the college clinic, into the dispensary, or out-patient department of an hospital, and get the opinion of "a head doctor" for nothing, and this from people who can afford to pay. The story of the dispensary patient who complained that she was kept waiting while she was paying a dollar an hour for her carriage at the door has its counterpart in the experience of every dispensary physician and clinical attendant. We have in mind the landlord of a doctor who called upon the latter for advice at a dispensary, and when the service was refused, said he never paid for what he could get for nothing. But it is useless to multiply examples, or to prove a point already well established.—*New York Medical Record,* Feb. 21, 1880.

Last summer, an old physician, in a letter in the Canada *Lancet*, written to a young practitioner who had addressed him about a no-pay patient, expressed the result of his experience in the following terms:—"Having, in a long time of practice, both from choice and necessity, done a good deal of gratuitous service, amounting to thousands of dollars, I have yet to find a single case where my charity work was appreciated. Those who pay nothing always offset it by liberal abuse, which keeps away those who would pay. The man you write about may be a very worthy man; but if you were making a struggle to build a house, would he or any one else work for you at reduced rates? It is the doctors themselves who allow their kind feelings to overrun their judgment, that are responsible for the wholesale robbery to which every doctor in the land is subjected. We deal with the afflicted; so does the undertaker; yet he is not expected to work for nothing. The people who pay are always grateful; the people who do not are, like other dead-heads, abusive, and always the most exacting and querulous."—*Philadelphia Medical and Surgical Reporter*, Feb. 21, 1880.

List of Candidates who were successful for appointments as Surgeons in Her Majesty's British Medical Service at the Competitive Examination held in London on 9th February 1880.

| No. | Name. | Marks. | No. | Name. | Marks. |
|---|---|---|---|---|---|
| 1. | Sylvester, G. H. | 1925 | 19. | Langdon, J. S. | 1350 |
| 2 | Macnamara, W. J. | 1900 | 20. | Heffernan, W. F. | 1345 |
| 3. | O'Sullivan, D. | 1725 | 21. | Nicholson, R. W. E. H. | 1345 |
| 4. | Milward, E. O. | 1710 | 22. | Crofts, J. G. W. | 1330 |
| 5. | Conolly, P. B. | 1660 | 23. | Dugdale, W. | 1325 |
| 6. | Woods, C. R. | 1600 | 24. | Irvine, D. L. | 1325 |
| 7. | Babington, H. F. | 1585 | 25. | Ronayne, J. | 1325 |
| 8. | Milward, W. C. | 1575 | 26. | Clabburn, C. H. | 1290 |
| 9. | Bracken, W. H. | 1565 | 27. | Cree, E. R. | 1275 |
| 10. | Macnamara, M. F. | 1490 | 28. | Drury, M. O'C. | 1260 |
| 11. | Sandeford, J. O. | 1480 | 29. | Deane-Freeman, W. | 1245 |
| 12. | Love, R. L. | 1455 | 30. | Nicholas, J. H. | 1200 |
| 13. | Murray, H. W. | 1455 | 31. | Franklin, D. F. | 1175 |
| 14. | Kerin, M. W. | 1420 | 32. | Curtin, J. L. | 1160 |
| 15. | Peterkin, A. | 1420 | 33. | Saunders, H. | 1155 |
| 16. | Harran, J. | 1405 | 34. | Battersby, J. | 1150 |
| 17. | Leckey, W. S. | 1395 | 35. | Lane, A. V. | 1135 |
| 18. | Maunsell, E. L. | 1375 | | | |

List of Successful Candidates for Her Majesty's Indian Medical Service, 8th March 1880.

| No. | Name. | Marks. | No. | Name. | Marks. |
|---|---|---|---|---|---|
| 1. | Dennys, G. W. P. | 4964 | 9. | Thompson, A. C. | 4368 |
| 2. | Macnamara, J. W. W. | 4920 | 10. | Burness, F. | 4326 |
| 3. | Stuart, H. O. | 4768 | 11. | Ward, G. J. | 4294 |
| 4. | Marsden, J. C. | 4552 | 12. | Reeves, F. C. | 4153 |
| 5. | Sykes, J. | 4503 | 13. | Poynder, J. L. | 4012 |
| 6. | Stewart, J. M. D. | 4450 | 14. | Hoey, J. | 3831 |
| 7. | Tuohy, J. F. | 4393 | 15. | Collington, A. G. | 3755 |
| 8. | Campbell, A. R. | 4375 | 16. | Daubney, C. A. | 3628 |

## OBITUARY.

James Craig, F.R.C.S.E.—We feel that it would not be right to allow this veteran to pass away without a few words of respectful remembrance. For more than ten years he had been an invalid, and in consequence very much withdrawn from the public eye, although some old professional friends and grateful patients continued to visit and cheer him in his comparative solitude. Born in 1799, the year in which James Syme first drew breath, he was an octogenarian, and had numerous interesting reminiscences of a period which has witnessed extraordinary changes, not in medicine and surgery only, but in all the sciences, in society itself, in its customs, its habits, its modes of thought. The son of a well-to-do farmer in Peeblesshire, Mr Craig, after acquiring the elements of a sound education, came to Edinburgh, and was apprenticed in due time to the late Mr George Bell, Fellow of the Royal College of Surgeons, who for many years occupied a very prominent place both as an operator and as a general practitioner in our northern metropolis. Young Craig turned the opportunities afforded by his position to the best advantage, and by his steadiness, intelligence, and reliable good sense, so secured the confidence of his master, that he eventually became his trusted assistant, residing in his house, helping him in his operations, and materially diminishing his labours and anxiety. After some years of this valuable training Mr Craig, through the influence of Mr Bell and other friends who knew his capabilities and worth, was established, in partnership with Dr Stewart of Gogar, at the village of Ratho, the centre of a rich and populous district, dotted over with stately mansions of the nobility and gentry, and within an easy distance from Edinburgh. He speedily made a secure position for himself, which he held with universal confidence and respect for more than forty years, shirking no branch of the profession, and frequently exhibiting faculties and attainments by no means common. So far back as 1829, the writer of this saw him perform lithotomy in presence of Mr George Bell—distinguished for his skill and success in that operation—and of the late Dr John Abercrombie, with dexterity and coolness; and about the same time he witnessed an operation for a formidable congenital hernia in an elderly man, in which several feet of the intestines required to be returned into the abdomen. Both patients did well in the confined space of country cottages, with no antiseptic precautions. Latterly, for a number of years, he was out of practice in cases purely surgical, preferring the services of his hospital friends who had more opportunity for keeping their hand in than he possessed. To the last, however, he was a careful observer; and not a few of the more interesting cases in Syme's *Clinical Observations* are noted as having been sent him by his friend James Craig of Ratho. Several papers were communicated by Mr Craig to the *Edinburgh Medical and Surgical Journal.* Perhaps the most important of these, entitled, "History of a Case of Spectral Illusions, with subsequent Loss of Memory of Words and Names, with the Appearances on Dissection," will be found in No. 129 and volume 46 of that work for 1836. The late David Craigie, M.D., afterwards physician to the Royal Infirmary, and author of several learned works, considered the case so interesting and valuable that he appended a supplement nearly as long as the paper itself. But, in our day, it is mainly noteworthy as being one of the earliest and most fully recorded cases of *aphasia.* It raised a controversy in which the late Mr George Combe, the phrenologist, who had witnessed the post-mortem examination, took a conspicuous part. This discussion is fully recorded in an appendix to Fletcher's *Physiology*, communicated by Dr Lewins of Leith, and will repay perusal. (We incline to the belief, in the light of present knowledge, that Combe had the best of the argument.) Advancing years, failing health, and the unceasing toils of an arduous profession brought Mr Craig to reside in Edinburgh about ten years ago. He has latterly suffered much from general *malaise* and infirmity; but, considering his long and active professional life, his constrained rest was borne with wonderful equanimity and patience. His wife, for many years very helpful to him, died about four years ago, and early in the present winter his elder daughter, wife of our distinguished townsman Dr G. W. Balfour, physician to the Royal Infirmary, was taken away. This sad event certainly hastened his own departure. He leaves behind him his only other child, the wife of A. B. Fleming, Esq., of Hillwood.

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## PERIODICALS RECEIVED.

Alienist and Neurologist,—Jan.
American Journal of the Medical Sciences,—Oct.-Jan.
American Journal of Obstetrics,—Oct.-Jan.
American Journal of Otology,—Oct.
American Practitioner,—Aug.-Feb.
Analyst,—Nov.-March.
Annales d'Oculistique,—May-Feb.
Annali di Obstetricia, Ginecologia, e Pediatria,—Jan.
Annals of the Anatomical and Surgical Society,—Jan.-Feb.
Archives Générales de Médecine,—Nov.-March.
Archives of Medicine,—Dec.-Feb.
Archives de Tocologie.—Nov.-March.
Archives of Dermatology,—Oct.-Jan.
Archivio Clinico Italiano,—1-3.
Baltimore Practitioner,—Jan.
Berliner Klin. Wochenschrift,—Oct. 27-March 22.
Birmingham Medical Review,—Jan.
Births, Deaths, and Marriages, Monthly Return of,—Oct.-Feb. Quarterly Return,—Sept.-Dec.
Boston Medical and Surgical Journal,—Oct. 9-March 4.
Brain,—Oct.-Jan.
British Medical Journal,—Nov. 1-March 29.
Bulletin Général de Thérapeutique,—Oct. 30-March 15.
Centralblatt für Chirurgie,—Oct. 25. March 29.
Chicago Journal,—Oct.-March.
College and Clinical Record,—Jan.-Feb.
Detroit Lancet,—Nov.-March.
Dublin Journal of Medical Science,—Oct.-March.
El Mercado,—March 10.
France Médicale,—Oct. 25-March 20.
Galveston Medical Journal,—Feb. 1.
Gazeta Medica da Bahia,—Aug.-Dec.
Gazette des Hôpitaux,—Oct. 21-March 20.
Gazette Hebdomadaire de Médecine,—Oct. 24-March 19.
Gazette Médicale de Strasbourg,—Nov. 1-March 1.
Gazette Médicale de Paris,—Oct. 25-March 13.
Gazzetta degli Ospitali,—Feb. 1-15.
Giornale Internazionale delle Scienze Mediche,—Fasc. 9-12.
Glasgow Medical Journal,—Nov.-March.
Independent Practitioner,—Feb.
Journal de Thérapeutique,—Oct. 25-March 10.
Journal des Sciences Médicales de Lille,—Dec.-Feb.
Journal of Anatomy and Physiology,—Jan.
Journal of Mental Science,—Jan.
Journal of Nervous and Mental Disease,—Oct.-Jan.
Kings, Proceedings of Medical Society of County of,—Nov.-March.
Klinische Monatsbläter für Augenheilkunde,—Nov.-March.
Lecciones Clinicas y Noticias Medicas,—Oct. 15.
London Medical Record,—Nov.-March.
L'Année Médicale,—Oct.-Dec.
Louisville Medical Herald,—Jan.-Feb.
Louisville Medical News,—Nov. 8-Jan. 17.
Maryland Medical Journal,—Jan.
Medical Enquirer,—Jan.
Medical Press and Circular,—Oct. 29-March 24.
Medical Times and Gazette,—Oct. 25-March 20.
Medical Tribune,—Feb.
Missouri Dental Journal,—Jan.-Feb.
Modern Thought,—Jan

Monthly Review of Dental Surgery,—Mar.
New Preparations,—Nov.-Dec.
New York Medical Journal,—Nov.-March.
NewYork Medical Record,—Oct. 18.-Mar. 6.
New York Medical Tribune,—Dec.-Jan.
Nordiskt Medicinskt Arkiv,—Band xi. 18-34.
North Carolina Medical Journal,—Jan.
Obstetrical Journal,—Nov.-Feb.
Obstétrique,—Jan.
Philadelphia Medical and Surgical Reporter,—Oct. 18-March 6.
Philadelphia Medical Times,—Oct. 11-Feb. 28.
Practitioner,—Dec.-March.
Progrès Médical,—Oct. 25-March 20.
Recueil d'Ophthalmologie,—Nov.-March.
Revue de Thérapeutique Medico-Chirurgicale,—Nov. 1-Dec. 15.
Revue Médicale,—Oct. 25-March 20.
Sanitary Record,—Nov.-March.
St Louis Courier of Medicine,—Oct.-Feb.
St Louis Medical and Surgical Journal,—Oct.-Feb.
Therapeutic Gazette,—Jan.-Feb.
Virchow's Archiv,—Sept.-Feb.
Washington National Board of Health Bulletin,—Oct. 11-Feb. 28.

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## PUBLICATIONS RECEIVED.

Annals of the Anatomical and Surgical Society. Vol. I. Brooklyn, New York, 1879.

Edward Bellamy, F.R.C.S.,—The Student's Guide to Surgical Anatomy. J. & A. Churchill, London, 1880.

Robert Bentley, F.L.S., and Henry Trimen, M.B., F.L.S.,—Medicinal Plants. Parts 38-42. J. & A. Churchill, London, 1880.

T. Lauder Brunton, M.D.,—Pharmacology and Therapeutics. Macmillan & Co., London, 1880.

General Index to Twelve Vols. of Trans. of Clinical Society of London. Longmans, Green, & Co., London, 1880.

W. Harrison Cripps, F.R.C.S.,—Cancer of the Rectum. J. & A. Churchill, London, 1880.

William Henry Day, M.D.,—Headaches. J. & A. Churchill, London, 1880.

John Eagle,—Note-Book of Solubilities. H. K. Lewis, London, 1880.

F. Engelmann, M.D.,—The Waters of Kreuznach. J. & A. Churchill, London, 1880.

Richard Gibbs,—Patents and Patentees. Victoria, Melbourne, 1879.

W. R. Gowers, M.D.,—Pseudo-Hypertrophic Muscular Paralysis. J. & A. Churchill, London, 1879.

Christopher Heath, F.R.C.S.,—Manual of Minor Surgery and Bandaging. J. & A. Churchill, London, 1880.

H. H. Kane, M.D.,—Hypodermic Injection of Morphia. Chas. L. Bermingham & Co., New York, 1880.

Dr Ferd. Adolph Kehrer,—Beiträge zur Klinischen und Experimentellen Geburtskunde und Gynäkologie. Band II. Emil Roth, Giessen, 1879.

Henry Kennedy, A.B., M.B.,—Observations on Fatty Heart. Fannin & Co., Dublin, 1880.

E. Klein, M.D., and E. Noble Smith, L.R.C.P.,—Atlas of Histology. Part 10. Smith, Elder, & Co., London, 1879.

B. T. Lowne, F.R.C.S.,—Aids to Physiology. Baillière, Tindall, & Cox, London, 1880.

Dr Just Lucas-Championnière,—Chirurgie Antiseptique. J. B. Baillière et Fils, Paris, 1880.

Charles A. MacMunn, M.D.,—The Spectroscope in Medicine. J. & A. Churchill, London, 1880.

J. Forsyth Meigs, M.D.,—On the Internal Use of Water for the Sick. Lindsay & Blakiston, Philadelphia, 1880.

Dr C. Morel,—Le Cerveau. J. B. Baillière et Fils, Paris, 1880.

W. Munro, M.D., C.M.,—Leprosy. John Heywood, Manchester, 1880.

Samuel Osborn, F.R.C.S.,—Notes on Diseases of the Testes. J. & A. Churchill, London, 1880.

H. S. Paterson, M.D.,—Studies in Life. Hodder & Stoughton, London, 1880.

Charles Rice,—Report on the Revision of the U.S. Pharmacopœia. New York, 1880.

Sydney Ringer, M.D.,—Handbook of Therapeutics. H. K. Lewis, London, 1880.

J. B. Roberts, A.M., M.D.,—Paracentesis of the Pericardium. J. B. Lippincott & Co., Philadelphia, 1880.

E. A. Schafer, F.R.S.,—Some Teachings of Development. H. K. Lewis, London, 1880.

C. E. Armand Semple,—Aids to Materia Medica and Therapeutics. Baillière, Tindall, & Cox, London, 1880.

Stephen Smith, A.M., M.D.,—Principles and Practice of Operative Surgery. Houghton, Osgood, & Co., Boston, 1880.

W. E. Steavenson, M.B.,—Medical Act Amendment Bill and Medical Reform. Baillière, Tindall, & Cox, London, 1880.

Transactions of the Obstetrical Society of London. Vol. 21. Longmans, Green, & Co., London, 1880.

Twenty-First Annual Report of the Registrar-General for Scotland.

Professor Rudolph Virchow,—Post-mortem Examinations. J. & A. Churchill, London, 1880.

J. Travis Whittaker, M.D.,—Student's Primer on the Urine. J. &. A Churchill, London, 1880.

# Part First.

## ORIGINAL COMMUNICATIONS.

### ARTICLE I. — *Report of the Edinburgh Royal Maternity and Simpson Memorial Hospital for the Quarter ending 31st January* 1880. BY ALEXANDER RUSSELL SIMPSON, M.D., F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University of Edinburgh.

(*Communicated to the Edinburgh Obstetrical Society, 11th February* 1880.)

WHEN I entered on my duties as physician to the Hospital, its sanitary condition was by no means satisfactory, as was indicated in the reports of the two preceding quarters. Finding that there was a disagreeable smell in the lower delivery rooms, Dr Croom and I got our energetic health officer, Dr Littlejohn, to inspect the premises. He promptly ordered the removal of the sinks from the delivery rooms; for although they were supposed to be properly trapped, and were said not to be in communication with the main drain, there was no doubt that the bad smell alluded to emanated from them. In a delivery room sinks are apt to become the receptacle of blood and other matters liable to decomposition. I need hardly add that a very thorough disinfection of all the apartments of the building was carried out.

Whether it was a result of these measures I am not quite prepared to say, but during the past quarter there was no mortality among the lying-in women, and the morbility was trifling. The annals of the period are happily altogether dull—so dull, that I only trouble the Society with a brief record by way of following up the good example of my colleagues who have already reported.

Mr H. Spence Reid, M.B., and Mr A. Murray Oram, M.B., had been appointed house-surgeons for the quarter. Mr Reid having resigned in January, Mr Charles A. M'Lean, M.B., was appointed to the vacant office. To these gentlemen I am indebted for the following statistics and records of cases.

The total number of cases treated in the extern and intern departments was 156.

*Extern Cases.*—The extern cases numbered 112, of which there were 14 primiparæ and 98 multiparæ.

The average age of the former was 21 years, of the latter 23 years.

As regards the mortality, there were no deaths among the mothers. There were 8 fœtal deaths, 6 being still-born, and 2 dying after delivery, from debility.

In 2 cases forceps were applied; the indication in one case being slightly uniformly contracted pelvis, which required the application of the instrument to bring the head through the brim and cavity after the os had been fully dilated. In the other patient there was accidental hæmorrhage, complicating a brow presentation. The forceps were applied when the forehead was at the vulva and the brow behind the pubic arch. On extraction, the occiput came over the perineum first, and then the forehead and face came under the symphysis pubis.

*Intern Cases.*—The cases treated inside the Hospital were 42 in number—24 being primiparæ, and 18 multiparæ.

*Ages of Patients.*—The average age in the case of the primiparæ was 23 years, in the multiparæ 27 years; so that the patients treated within the Institution were, on an average, older than those who preferred to be attended outside.

*Duration of Labour.*—The average duration of labour in these intern patients was, in the case of the primiparæ—1st stage, 12 hours; 2d stage, 2 hours; 3d stage, 10 minutes; making an average total duration of 14 hours 10 minutes. In the case of the multiparæ, the average duration of the 1st stage was 7 hours 49 minutes; the 2d stage, 1 hour 31 minutes; 3d stage, 14 minutes; making the average total duration 9 hours and 34 minutes. The number of cases is too small to make the proportional figures of much value; but the difference in duration of the third stage in the two classes—that in multiparæ lasting nearly one-third longer than in primiparæ—makes it worth while to inquire whether, in a wider area of observation, such a difference will be found to prevail.

*Presentations and Positions.*—As regards the *presentation* of the children, all the 44 patients had vertex presentations, with the exception of one of the fœtuses in a twin case, which presented by the breech.

As regards the *position* in the *multiparæ*, we have the following proportion in 14 cases:—

L.O.A. = 8; R.O.P. = 4; R.O.A. = 1; L.O.P. = 1.

In the *primiparæ*, 22 cases:—

L.O.A. = 16; R.O.P. = 3; R.O.A. = 2; L.O.P. = 1.

*Plural Births.*—There were two cases of twins, both in multiparous patients:—

(1.) 1st child, vertex; R.O.P.
2d „ breech; position not ascertained.
(2.) 1st child, vertex; R.O.P.
2d „ „ ; L.O.A.

*Sex of the Children.*—All the four twin children were males, and there were in all 11 males and 9 females among the children of the multiparæ, and 14 males and 12 females among the children of the primiparæ.

*Mortality.*—There was no mortality among the mothers. There were 4 fœtal deaths, apart from the twin cases, where the fœtuses were premature and still-born.

*Instrumental Labour.*—There was 1 instrumental labour, a forceps case, which is reported at length below.

The average duration of the patients' residence in the Hospital was 17 days. This long duration was due to several patients having been detained in hospital for charitable reasons during the severe weather, and especially to the circumstance that one patient was in Hospital for 60 days, suffering from mammary abscesses, while the forceps case remained in hospital for 40 days, as she only slowly recovered her strength.

*Conditions of Uterus, etc., on Dismissal.*—From examination made of the patients on dismissal, the following results were obtained :—

In 15 out of 16 examined, the fundus uteri was to the front, and felt at points varying from on a level with the brim of the pelvis to 3 inches above it. In one case it was retroflexed.

In all these cases the os uteri was fissured, in 3 cases to the right side only, in 1 posteriorly, and in the others to the left side or transversely. Of the 3 cases in which the fissuring occurred on the right side only, it is worthy of note that in 2 of them the occiput was placed during labour in the right side of the pelvis.

*Special Cases.*—Of individual cases I have selected the following as those which alone have any claim to a more complete record :—

### CASE I.—*Slight Ante-Partum Hæmorrhage; Tedious Labour; Forceps Delivery; Prolonged Convalescence.*

E. M., aged 21, admitted 8th December 1879; primipara; has had one previous miscarriage. Last menstruation was in the beginning of March 1879; quickening was in July. Patient was admitted about 11.30 A.M., complaining of a discharge of blood from the vaginal orifice, which began about 6 A.M., but was not profuse. On examination by the house-surgeon, the vagina was found to be small; the os uteri was patulous, easily admitting one finger. On sweeping the finger round the presenting vertex, no abnormality could be detected. On withdrawing the examining finger, it was covered with blood mixed with mucus. The fœtal heart could be heard. Patient was ordered to keep quiet, and a drachm of the liquid extract of ergot was administered. There was no history of any injury having been sustained by the patient. Hitherto she had not complained of any labour pains. At noon there was some discharge of liquor amnii, but the os uteri was no larger than it was at the time of previous examination. After this discharge hæmorrhage ceased. At 3 P.M. labour pains set in, and at 3.30 P.M. the two fingers could be introduced within the os uteri. The pains came on at irregular intervals (usually about every thirty minutes) up to 6 P.M., after which time they recurred every fifteen minutes. They, however, produced little effect upon the size of the os uteri, but gradually increased in frequency, until, at 10 P.M., they recurred every five minutes, but were of short duration. At 12 P.M. patient was in a very excited condition, tossing from side to side, throwing her arms wildly about, and complaining of great thirst. Her lips and tongue were dry, and covered with sordes. The uterine contractions came on about every minute, and lasted for about thirty seconds, the os uteri being at this time the size of half-a-crown. Bi-meconate of morphia, gr. $\frac{1}{4}$, was administered subcutaneously. This produced no effect upon patient, so was followed by 20 grains of chloral hydrate twenty minutes subsequently.

It was noted at 2 A.M. the bladder seemed to be well distended, but on passing the catheter only two ounces of urine were drawn off. Ten minutes after noon Professor Simpson returned, and judging that there was now sufficient dilatation of the os uteri to allow of the use of forceps without injury to the cervix, he delivered the patient by using his own modification of Tarnier's forceps. As the head passed the vulva, $6\frac{3}{4}$ grs. of ergotin were injected into the right buttock.

On being born, the child was in a state of apnœa, necessitating the alternate plunging of it into cold and warm water, and the employment of Schultze's methods for the establishment of respiration. The sex of the child was female; the weight 8 lbs. 10 oz., and the length 21 inches. The caput succedaneum was over left parietal eminence. Both parietal bones overlapped the occipital at the lambdoidal suture.

Circumference of fœtal head, 13 inches; bi-parietal diameter, $3\frac{1}{4}$ inches; occipito-mental, $4\frac{3}{4}$ inches; occipito-frontal, $4\frac{1}{2}$ inches; sub-occipito-bregmatic, 4 inches.

The following lesions were produced by the forceps:—1. On fœtus—slight facial paralysis on left side; depression in skin over left temple, running down for the length of an inch in front of left ear; abrasion just above right zygomatic arch. 2. On mother—fissure of left labium minus, near pubic arch; fissure of right labium majus, towards its posterior extremity; laceration of vaginal mucous membrane on right side.

*Progress.*—There was a good deal of swelling of the soft parts in the vagina and round the vaginal orifice, which rendered daily catheterization necessary for two weeks. The child, owing to the paralysis, had to be fed with a spoon for several days after delivery. The paralysis gradually subsided, and the other lesions caused by forceps healed. On tenth day post partum the labial fissures were healing in a satisfactory manner. On making a bimanual examination, the fundus uteri could not be recognised lying anteriorly, as the bladder was distended with urine; but on the urine being withdrawn the fundus was easily detected lying to the front. The progress of the case was satisfactory, though tedious, as patient took a long time to recover her strength.

Discharged well, 14th January 1880.

On abdominal examination, fundus uteri was not above the pelvic brim. The separated surfaces in the fissured labium minus had cicatrized. The fissure in the labium majus had healed by first intention. On vaginal examination, the vaginal tissue was found to be cicatrized. Os uteri patulous and fissured. Fundus uteri lay well to the front.

### CASE II.—*Normal Labour; Herpes Zoster during Puerperal Week; Arrest of Lactation; Mammary Abscesses.*

J. S., æt. 22, admitted 21st November 1879. Delivered 22d November 1879; labour normal. Child presented in the first vertex position; female, and healthy. She had some inconvenience with her breasts on the 24th. Nipple shields were given her, and they got somewhat better. On the 29th her temp. rose to 101°·2. This was explained by an eruption of herpes zoster on the right side of the thorax which appeared next day. This was treated with lint soaked in carbolic oil. On 4th December the temp. rose to 103, 104–6. This was caused by an inflamed and tender state of the breasts. Aconite emul. (B.P.) ♏v. every hour was given. The temp. fell, but on 7th December 1879 it again rose to 102°. On examination hard lumps were found on the breasts. Hot fomentations of linimentum belladonnæ applied over breasts. An erysipelatous appearance of the face was observed, and carbolic oil applied.

The *urine* acid, sp. gr. 1024; urates; no albumen. An abscess in right breast was opened; a large quantity of pus flowed out of the incision. A poultice of linseed meal was afterwards applied to the breast.

Patient was dismissed on 20th January 1880. The sinuses in the right breast were almost healed, though at some parts the breasts were slightly swollen and indurated. Her left breast had healed altogether.

Two incisions were made on left breast on 17th December 1879, and another incision on right breast, to open some abscesses which had formed on these places, on 19th December 1879.

### CASE III.—*Normal Labour; Mammary Abscesses.*

A. M., aged 21; primipara; no miscarriages. Last menstruation was in the beginning of March; period of quickening doubtful. Admitted 5th January 1880; delivered 7th January 1880. Presentation vertex. Position R.O.P. Duration of first stage ten hours; of second stage, two hours; of third stage, eleven minutes.

*Progress.*—On the afternoon of the second day patient had shiverings, and complained of pelvic pain. There was tenderness on pressure over the lower part of the abdomen. As the evening temp. was 104°, tinct. aconit. (B.P.) ♏ ij. were administered several times during the night, and the abdomen below the umbilicus was painted with tinct. iodi. On the third morning the pulse was 126, and the temp. 100°·2. The abdominal tenderness was better. Patient made her water without difficulty, and the bowels were moved by aperient medicine. Lactation was satisfactory. On the third evening the pulse was 128, regular, full, and compressible, while temp. was 104°. On administering castor-oil in the morning patient vomited. The evacuation of the bowels was secured by compound liquorice powder. Tinct. aconit. (B.P.) ♏ ij. were ordered to be taken every hour during the night, during which the following shows the temperature:—2 A.M., 105°·2; 4 A.M., 104°; 6 A.M., 104°·3; 8 A.M., 104°.

On the morning of the 4th day the pulse was 112, and the temp. 103°. Abdomen tender to the touch, and tympanitic. Lochial discharge slightly fœtid. Milk plentiful. Bowels opened loosely once in the early morning. Great thirst, and dryness of lips and tongue. Patient was removed into special ward. The whole of the abdomen was painted with tinct. iodi., which is to be repeated thrice daily. Vaginal carbolized injections to be used thrice daily instead of twice. Aconite discontinued, and ten-grain doses of sulphate of quinine substituted, which are to be repeated as often as is thought necessary. At 2.15 P.M. the temp. was 102°·7, and patient vomited the quinine which had just been given to her. The thirst was treated by giving tinct. ferri. perchlor. ♏ x. in a wineglassful of water as a drink. Patient found it impossible to keep the quinine on her stomach, so aconite was again had recourse to in doses of five minims of the B.P. tincture every forty-five minutes. The first dose was given at 6.15 P.M., when the temp. was over 100°. At 7 P.M. the temp. was 99°·6, and at 8 P.M. 97°. At 8.20 P.M. aconite was ordered to be given every hour and a half, instead of every forty-five minutes.

*5th day*, A.M.—Patient better. Pelvic tenderness much diminished. Has had diarrhœa through the night. Temp., 101°; pulse, 96. Aconite to be taken every hour in five-minim doses. Evening temp., 103°·2; pulse, 120.

*6th day* A.M.—Temp., 102°·4; pulse, 100. Tenderness on pressure below the umbilicus. Bowels not moved for the last forty-two hours. Ordered liquorice powder. Evening temp., 102°·4; pulse, 120.

*7th day*, A.M.—Pulse, 114; temp., 100°·6. P.M.—Pulse, 104; temp., 99°·4.

*8th day*, A.M.—Pulse, 88; temp., 95°. Aconite discontinued. Complains of scalding pain about meatus urinarius on micturition, the cause of which is a slight fissure. Glycerin carbolic (1 in 16).

and ungt. zinc. oxid. to be applied to fissure. P.M.—Pulse, 116; temp., 101°·2.

*9th day*, A.M.—Pulse, 90; temp., 96°·8. Scalding pain better. Evening temp., 98°·6; pulse, 96.

*12th day*, A.M.—Pulse, 96; temp., 98°. Evening pulse, 120; temp., 101°·4. During afternoon patient was removed into general ward. At night the left mamma was found to be hardened just above the nipple, and to be engorged and painful. Hot fomentations were applied to the breast, and patient took liquorice powder. No milk could be extracted from the breast, either by applying the child or the breast-pump.

*13th day*, A.M.—Pulse, 132; temp., 100°. Breast still hard and painful. Bowels not moved by the powder. Ordered castor-oil, and efforts to be made to draw off milk from the breast. P.M.—Pulse, 120; temp., 103°. Breast very painful, engorged, and tense. All efforts to extract milk have failed. Bowels freely opened. Tinct. belladonna to be sprinkled over the fomentations, and also to be rubbed into the breast. Patient to take tinct. aconit. ♏v. every hour.

*14th day*, A.M—Pulse, 112; temp., 100°·2. Child weaned at mother's desire. Left breast still hard and engorged, but less painful. Tinct. belladonna to be also applied to right mamma, and the breast-pump to be applied to it. Bowels to be kept freely open; and pot. iodid. gr. x. to be taken thrice daily. Evening pulse, 144, temp., 103°.

*15th day*, A.M.—Pulse, 96; temp., 99° P.M.—Pulse, 104; temp., 100°·6.

*16th day*, A.M.—Pulse, 120; temp., 98°·8. Left mamma softer, and not painful. Free discharge of pus from left nipple. Evening temp., 101°·8; pulse, 116.

*17th day*, A.M.—Pulse, 108; temp., 98°·4. Evening temp., 100°·4; pulse, 100. Still some hardness on left side of left breast. Discharge from nipple cured. Hot fomentation, tinct. belladonna and pot. iodid. continued. Subsequent progress satisfactory.

Dismissed 30th January 1880, 23rd day post partum.

Os uteri transversely fissured on right side.

### CASE IV.—*Normal Labour; Pelvic Cellulitis.*

Mrs R., aged 27; multipara; one previous miscarriage. Last menstruation began on 26th April 1879; quickened in August. Admitted and delivered 14th January 1880. Presentation vertex. Position, left occipital. Right parietal bone overlaps left.

Circumference of fœtal head, 13¼ inches; bi-parietal diameter, 3½ inches; occipito-mental diameter, 5 inches; occipito-frontal diameter, 4¾ inches; sub-occipito-bregmatic, 3 inches. Slight fissure in perineum.

*Progress.*—During the third night patient had shiverings. On the fourth morning the pulse was 120, temp., 140° F. No pelvic tenderness. Milk scanty. Tympanitis. Lochial discharge plentiful, and not fœtid. Micturition free. Ordered castor-oil, which had the effect of freely moving the bowels.

On the fourth night pulse was 162; temp., 103°·6. Ordered tinct. aconit. (B.P.) ♏ij. every hour.

On the fifth morning patient had passed a sleepless night. No pelvic tenderness. Suffers from a cough. Nothing abnormal to be found in the lungs. Lochial discharge still normal. Milk remains very scanty in quantity. Suffers from headache and thirst. Micturition normal. Temp. 104°. Tinct. aconit. ♏v. to be given every half hour. Tympanitis still present. Whole anterior surface of abdomen to be painted with tinct. iodi. thrice daily. Tinct. ferri perchlor. ♏x. in a wineglassful of water to be given as a drink. Patient to be moved into special at 1.45 P.M. Temp. was 105°·2. Aconite to be given every twenty minutes in five-minim doses. Vaginal carbolized injections to be given thrice instead of twice daily. Temp. at 3 P.M. was 104°·2; at 4 P.M., 105°; at 7 P.M., 104°·8; at 8.30 P.M., 104°·6; and at 10 P.M., 103°·8. At 11 P.M. 10 grains of sulphate of quinine were given, and the dose repeated at 1.15 A.M. The temp. now steadily fell, until at 9 o'clock A.M. on the sixth day it was 99°, and the pulse 96. Patient felt much better. The bowels have been freely opened. No abdominal tenderness, but still some tympanitis. As patient suffered from cinchonism, 5 minims of tinct. aconit. (B.P.) were given every forty-five minutes in the place of the quinine, but the temperature gradually rose to 101°, and ten-grain doses of sulphate of the quinine were resumed. As patient in the course of a few hours suffered so much from the effects of the quinine, aconite was again given, but failed to keep the temperature down.

*7th day.*—There is an evening rise of temperature and diarrhœa. Patient complains of pain in left hip-joint and left knee-joint. There is no deposit in the left lateral fornix.

*10th day.*—Patient very weak. Ordered strong beef-tea thrice daily. Still an evening rise of temperature, and a little diarrhœa. No abdominal spots.

*11th day.*—As the diarrhœa still continues, patient is to take lime-water, and have the milk she drinks boiled, and the white of egg mixed with it.

*12th day.*—Diarrhœa better. Still complains of pain in the left leg.

*15th day.*—Diarrhœa and vomiting set in after taking soup for dinner.

*16th day.*—Diarrhœa still continues very troublesome. Fundus uteri 3 inches above pelvic brim, and lying to the front. Fissure in perineum healed. Os uteri transversely fissured on left side. Patient to continue taking the quinine.

### CASE V.—*Favus in a Multipara.*

Jane Hughes, æt. 30, multipara, admitted and delivered 15th

January 1880. Child male; third; healthy. Last catamenia on 6th May 1879; quickening about middle of August 1879. When the patient was admitted, the scalp was found to be covered with a very extensive crust of tinea favosa, for which she had had her hair cut short, but for which she had had no medical treatment. Hour of delivery, 5.52 P.M. Labour natural. Duration of first stage not known; second, one and a half hours; third, six minutes Presentation and position, vertex, R.O.P. Diameter of fœtal head:—Circumference, 13½ inches; occipito-mental, 5 inches; occipito-frontal, 4¾ inches; bi-parietal, 3¾ inches; sub-occipito-bregmatic, 3½ inches; bi-temporal, 3¼ inches. Caput succedaneum not well marked. The cord was twisted round child's neck twice. No overlapping of the bones.

*Progress.*—The patient kept well for two days. Pulse after delivery 76.

| | | Pulse. | | Temp. | |
|---|---|---|---|---|---|
| | | M. | E. | M. | E. |
| *Jan.* 15, | I. | ... | 80 | ... | 97° |
| *Jan.* 16, | II. | 76 | 80 | 99° | 98°·4 |
| *Jan.* 17, | III. | 120 | 104 | 100° | 99°·8 |

Patient has had shiverings. Pelvic tenderness. Scarcely any milk in the breasts. Ordered tinct. aconiti. (B.P.) ♏ v. every hour. Iodine to be painted over abdomen, and castor-oil to be taken internally. Patient's head (since admission) affected with tinea favosa. Carbolic oil (1-20) to be applied over the whole head, which is divested of hair.

*18th January, fourth day p.p.*—Pulse, 108–120; temp., 99°–101°·2. Aconite to be continued. Still some pelvic tenderness. Complains of being sick. She vomited at night; vomited matter liquid and greenish in colour, with a slight quantity of undigested food.

*19th January, 5th day.*—Pulse, 84-84; temp. 98°·4–100°. 10 grs. of sulphate of quinine given thrice during the night.

*20th January, 6th day.*—Pulse, 76-96; temp., 98°·4–98°. Feels better. A mixture of quinine, diluted sulphuric acid, and tinct. of steel, given as a tonic. Complains of cough.

*21st January, 7th day.*— Pulse, 84-76; temp., 98°·4–98°·2. Cough mixture ordered.

*22d January, 8th day.*—Pulse, 84–76; temp., 98°–98°·4.

*23d January, 9th day.*—Pulse, 60–68; temp., 97°–98°·4. Cough better.

*24th January, 10th day.*—Pulse, 78-84; temp., 98°·4–99°.

*25th January, 11th day.*— Pulse, 84–68; temp., 98°·4–100°. Patient was dismissed on 26th January 1880. Child well. The favus in her head had much improved, the carbolic oil treatment having been continued till time of dismissal.

*Per Vaginam Examination.*—Os uteri patulous, irregular, and lacerated. Uterus to the front.

### CASE VI.—*Normal Parturition—Cephalhæmatoma Neonati.*

Jane Condie, aged 25. Admitted and delivered 21st November 1879; primipara. Period of quickening not known; last catamenia in the beginning of March 1879. Presentation vertex; position R.O.P. Sex of child was male. Second stage lasted two hours. The head of fœtus rested upon the perineum for an hour, producing a slight caput succedaneum over left parietal eminence. The left parietal bone overlapped the right. There was a cephalhæmatoma over left parietal eminence.

Circumference of fœtal head, 12 inches; bi-parietal diameter, $3\frac{1}{4}$ inches; occipito-mental, $4\frac{7}{8}$ inches; occipito-frontal, $4\frac{1}{16}$ inches; sub-occipito-bregmatic, $3\frac{3}{8}$ inches.

*Progress.*—Good. Swelling, which was the size of half a mandarin orange, on left side of fœtal head gradually developed a hard ring at its circumference. It was left to the natural changes, and had become considerably lessened ere the patient left the hospital.

On the tenth day post partum maternal temperature rose to 105°. Tinct. aconit. (B.P.) ♏j. every hour, was given. On the eleventh morning the temperature was 100°, and at night 99°.

Discharged 10th December 1879.

Fundus uteri was on a level with the pelvic brim. Os uteri was fissured transversely on both sides. The uterus lay to the front.

## ARTICLE II.—*Animal Vaccination.* By BENJAMIN BELL, F.R.C.S.E.

HAVING recently perused with much interest a report on animal vaccination by Dr Henry A. Martin of Massachusetts, I am strongly impressed with the conviction that, whatever the causes may be, the great discovery so amply illustrated by Jenner at the close of last century has not been followed by the splendid results which he and his benevolent followers had then every reason to anticipate. We cannot study the works of these men—the original papers of Jenner, and notably the very able and exhaustive treatise of our own townsman, the late Mr James Bryce, among others—we cannot reflect upon the numerous varieties of proof which have transpired during the long intervening period, without being convinced that a real and almost inestimable boon was conferred on the human race when the knowledge of the cowpock being a protective *from* or a mitigative *of* variola was first promulgated. Still, it is a melancholy fact that, after the lapse of eighty years, the loathsome and often fatal disease, which there was good reason to believe might have been extirpated long ago, is seldom entirely absent from the Registrar-General's Reports, and is still ready at any moment to assert itself as an epidemic.

Recent legislative enactments have done much to render the practice of vaccination more general than it was, and care is now taken, we believe, at most medical schools, to instruct students in the intelligent and accurate performance of the duties connected with it: but there are many grounds for surmising—nay, for concluding with confidence—that, even where the operation is skilfully performed, the results are often unsatisfactory. In short, the true *vaccine vesicle*, such as would have satisfied Jenner, Bryce, and their well-informed and conscientious cotemporaries, is not secured as a *sine qua non* in every case; the result being that many children are registered as successfully and satisfactorily vaccinated who, were more care taken under an enlightened sense of responsibility, would be rejected as not adequately protected and safe from the contagion of smallpox. We have no wish to convey the idea that such cases are knowingly placed on the register in the mere routine performance of an enjoined duty; but we are satisfied that, whether from ignorance or carelessness or a deficient sense of the importance of thorough vaccination to the individual and to the community, it comes to pass that the process is often inadequately carried out, and many persons are regarded as safe who, when exposed to the contagion of smallpox, will inevitably yield to its power.

When an alarm arises on account of the appearance of the disease among individuals thus unprotected, recourse is had on all hands to revaccination; and here again new sources of fallacy and disappointment appear. The reliable supplies of vaccine lymph are speedily exhausted, or at least unduly pressed upon; and how this should be the case is obvious. Cases really protected by previous vaccination do not take at all, or, if they do, it is in an unsatisfactory manner, and so they are unproductive in the way of furnishing a fresh supply of lymph. Too often, we fear, when a tolerably normal-looking vesicle results, which it sometimes does, as a mere local affection, lymph is taken from it and employed in the revaccination of other individuals. As a rule, although exceptions have been met with, there is no satisfactory result; and it is hastily inferred that such individuals are safe in virtue of having been effectually protected on a previous occasion. It may be quite true that they are safe; but the inefficiency of the revaccination, under existing circumstances, is a very doubtful proof of their safety.

At such a time of vaccine *famine*, as it has been felicitously called, there is a temptation, not to be wondered at, to employ lymph from sources which at other times would be avoided. When persons apply for revaccination under the alarm of a smallpox epidemic, you are willing to give them a chance of benefit, even although the lymph may be less promising than you would employ in ordinary circumstances. This inferiority in its character may be suggested by various considerations. 1. It may be taken, as we already observed, from a vesicle of tolerable perfection in a case of revaccination—a mere local affection, unaccompanied by any constitutional impregnation. 2. It may be taken from a vesicle already unduly exhausted by previous applications, so that the fluid now obtained is little more than a watery serum divested of vaccine virus. 3. It may be taken from an infant of whose family or personal history we know nothing, and who has the solitary recommendation of presenting an apparently normal vesicle on its arm. We are not careful to make minute inquiries at a season when lymph of any passable quality is in such demand. This last consideration opens up a question to which I shall return at a subsequent part of this paper.

This seems to be the proper place for recalling attention to the ingenious test of complete, satisfactory vaccination which Mr Bryce suggested and practised early in the century, but which is probably seldom had recourse to at the present time. The idea occurred to him, while anxiously considering the desirableness of some reliable ground of distinction betwixt cases where the vaccine virus went no farther than the production of a normal vesicle at the seat of insertion and those cases in which, besides the local effect, it also pervaded the system and rendered it inaccessible to the contagion of smallpox. That there is such a ground of doubt and disappointment is beyond dispute. Remembering that it had been noticed in cases of artificially induced smallpox "that if the same person was inoculated every day until the fever induced by the first inoculation supervened, all the other punctures quickly advanced in their progress, and that in the course of a day from the time the fever or general affection began even that puncture which had been last made, perhaps only twenty-four hours before, equalled in maturity the one first made, perhaps eight or nine days before, and from which the fever had arisen," Mr Bryce logically inferred that these facts afforded an adequate proof of the presence of the variolous action in the system. In connexion with these facts and reasonings he recalled certain cases of vaccination he had met with, in which one or two vesicles quite characteristic of the ailment, and only to be accounted for by a second and accidental inoculation, had matured during the course of the disease; and these observations encouraged him to hope that the same law which had been ascertained in regard to smallpox would be found to hold good in cowpox. He accordingly instituted a series of experiments—carefully detailed in his treatise—which make it quite clear, in our opinion, that a second vaccination, performed a few days after the first, produces a vesicle which advances to perfection so rapidly that, although considerably smaller in dimensions, it resembles in all its essential characters the vesicle resulting from the primary inoculation.

The establishment of this fact seems to warrant the conclusion at which Mr Bryce arrived, that cases in which the phenomenon is observed may be regarded as instances of perfect and satisfactory vaccination in which the whole system is affected.

When the importance of the knowledge obtained in this way is borne in mind, any little additional trouble in attaining it is unworthy of consideration. It is desirable in every case to observe the vaccine vesicle more than once during its growth; and to insert some virus at a new point on the fourth or fifth day will not add much to the vaccinator's trouble, especially when the required lymph may be obtained from the primary vesicle or vesicles, for it seems to be a matter of no importance whether it be taken from that source or from another individual. We do not regard the employment of Bryce's test as essential; but when no insurmountable difficulty exists, it may be advantageously had recourse to as an additional ground of confidence both to the practitioner and to his patient. If the test fails in any case, the propriety of revaccination at an early date may be kept in view.

The preceding remarks are preliminary to what I wish to say in the remainder of this communication. I mentioned at the outset that thoughts had been awakened in my mind, in regard to the comparative failure of vaccination in fulfilling the splendid anticipations of Jenner and his cotemporaries, by the perusal of a recent report on animal vaccination by an American physician who has devoted himself very earnestly to the subject for many years.

The report is comprehensive and of considerable length, and accessible to comparatively few; but a sufficiently full and accurate review of it which appeared in the *Edinburgh Medical Journal* of March 1879 renders it unnecessary for me to enter into many details on the present occasion.

Certain points, however, seem to be so important, that I shall make no apology for bringing them prominently forward.

After long and accurate observation, Dr Martin maintains that the *vaccinia* induced by the virus of very long humanization—such as that procured by him from the English Vaccine Institution, which he regards as the finest lymph of the kind of which he has had any experience—differs in some respects from that described by Jenner and his immediate successors. He holds also that virus of long humanization induces a disease of much briefer duration and intensity than original and early virus, by which he means virus got either direct from the cow, or from human subjects after a very few removes from it. In 1859 Mr Robert Ceely of Aylesbury supplied him with twelve capillary tubes of fluid lymph. These he used in his practice, and issued virus from that source for several years, to the extent of from 15,000 to 20,000 charges annually. "The course of the disease induced by this virus was usually *eleven days* from insertion till the crust either fell spontaneously or could be very easily and painlessly removed. It was an unusual circumstance for a crust from this vaccination to adhere to the arm till the fourteenth day." For four years he tested this stock by revaccinating those who had been vaccinated with it by French virus which he very fully ascertained to be of a very early human remove from the cow. It always manifested the same qualities, "a large, full vesicle, a vivid broad areola, and a firm, dark, well-formed crust, never easily detached before the twenty-first, and hardly ever falling before the twenty-sixth day." It is worthy of notice that he made a great many vaccinations, both with this French "stock" and with that procured from Mr Ceely, one on one arm and the other on the other, and each stock preserved its distinctive qualities. At the end of four and a half years the French stock was lost, and, failing to recover it after repeated attempts, Dr Martin applied to the National Vaccine Institution of Great Britain, and at various times received ample supplies of the famous stock of that well-managed institution. This virus he propagated exclusively for ten years. The *vaccinia* induced by it had a duration of *fourteen* days, very exactly, from the insertion to the fall of the crust. His accuracy on this point may be relied on, for on the knowledge of it depended his success in collecting vaccine crusts in any considerable number and in the most perfect condition. In this sharp outlook for virus in different forms during twenty years it was necessary for him to inspect arms with a frequency quite unusual; but it was, as we may see, the means of informing him very fully on many points not often very closely or accurately investigated.

At one time Dr Martin maintained five different stocks of vaccine, and he tells us that he frequently vaccinated patients from all five. On the eighth or any subsequent day he could pick out each from the five vesicles on the patients' arms; and a score of crusts derived from all these stocks and thrown together could be easily and accurately sorted out, from his familiarity with the peculiarities of size, form, and colour of each. In fact, he holds that there is an undoubted difference in the character and vigour of original stocks of cowpox in the animal, and these peculiarities are preserved and perpetuated through a great number of human transmissions; while, at the same time, it cannot be doubted that a great change and modification takes place—although gradually and imperceptibly—from one transmission to another. This change, he maintains, is always in the direction of a *shortening* of the period during which the phenomena of *vaccinia* are developed, a decrease in the intensity of these phenomena, and in the effect of their evolution on the human system.

Dr Martin attaches great importance—besides various other points of deterioration in the results of long-humanized virus—to the difference in the scar left by the falling of the crust. The scar should be as distinct and defined as if stamped by a sharply-cut die, and the scars of a hundred such vaccinations should be almost as like each other as the impressions of a hundred coins fresh from the mint. "This matter of the vaccine scar," he adds, "seems to me of very great importance, and I think the sooner the profession accept as a fixed fact that, as *a general rule*, there is a direct relation between the perfection of a vaccination and the typical perfection of the resulting scar, the better."

I remember well that those who had begun to vaccinate soon after Jenner's great discovery attached very great importance to the characteristic *foveæ* of the cicatrix; and I suspect that latterly these have attracted less attention, possibly from being seldomer met with in consequence of long-continued human transmission.

It is unnecessary to detail the interesting circumstances by which the stock of virus from the heifer now employed by Dr Martin was originally obtained and has been preserved during the last eight or nine years. The history is both interesting and reliable, and may be seen in the review already referred to, or at greater length and more minutely in the original report. For some time after the system of heifer vaccination was inaugurated in America Dr Martin devoted himself to the daily vaccination of infants, some exclusively with the animal virus, but most of them on one arm with the old stock (that of the National Vaccine Institution of England), and on the other with that from the heifers. He was soon, from daily careful observation of these very numerous vaccinations, enabled to judge of the apparent merits of the new lymph in direct contrast and comparison with those of the old, long-humanized stock, of which he had constant experience for twenty-five years; and, from his having devoted himself to the speciality of vaccine propagation for thirteen years, this experience was one of every day, almost every hour.

He has come to the conclusion that, in a period much longer than is found to involve very great deterioration and change in lymph of human transmission, *true animal vaccine* suffers no essential change or deterioration whatever.

That this conclusion is a reasonable one will appear, I think, on considering the unavoidable drawbacks of arm-to-arm vaccination. This has been going on in Great Britain for about eighty years. During so long a period numerous unfavourable circumstances must have accompanied the process of transmission. Let us only think how many feeble, unhealthy, not to say diseased children have been the *media* through which the virus has come down to us! In how many cases has the inoculation been done from doubtful sources! how frequently have carelessness and ignorance been displayed, even when there was no special difficulty in procuring virus! and can it be denied or doubted that, during the panics which an epidemic of *variola* always awakens, there will be added to these ordinary sources of imperfect vaccination that dearth of vaccine lymph, and that temptation to be easily satisfied with it in any form, to which I formerly alluded? It will not do to allege that a remedy will be found, and all will be put right by vaccinating healthy children, and so filtering, as it were, the degraded virus through their healthy systems. Of course, at present, this is the best thing we can do, and a feeling of dubious security may be thereby engendered; but we cannot help feeling that there are strong grounds for the belief that the long and precarious process of humanization through which vaccine lymph has come down to us must have impaired its efficiency. These considerations, irrespective of others to be adduced, seem to point to the desirableness of renewing the supply by having recourse to the heifer. This view is forcibly stated in an interesting paper in the *Edinburgh Medical Journal* (November 1878) by Dr P. M. Braidwood of Birkenhead, whose position as a public vaccinator under the Act 1867, and whose able investigations of the life history of *contagium*, give great weight to his opinion.

That the vaccine lymph of long humanization with which we are familiar has really undergone deterioration is proved, I think, by the following facts, for which we are indebted to Dr Martin. It must be a familiar experience with most practitioners that certain persons, after being revaccinated again and again without any result, so as to be pronounced *insusceptible*, have nevertheless taken smallpox. Dr Martin, with his large and precise information, tells us that while only 35 per cent. of those operated on with old humanized lymph experience vaccinal effect, no fewer than 80 per cent, on being inoculated with *animal virus*, exhibit a successful result. That is to say, 45 per cent. may be reasonably regarded—although insensible to the feebler influence of long-humanized vaccine virus—as yet liable to be affected, on exposure, by the intenser influence of smallpox. Or, in other words, instead of concluding that because they have resisted revaccination with our ordinary lymph they are safe from smallpox, we may logically come to a very different conclusion, now that animal virus, or that of a few human removes from the animal, has succeeded in producing the desired effect. It may be regarded as a reasonable doctrine, that every individual susceptible of revaccination by perfect vaccine lymph is also susceptible of variolous contagion.

The foregoing considerations seem to be strongly in favour of having recourse—from time to time at least—to the animal for our supplies of vaccine lymph. But other advantages of doing so may be adduced. These have been stated *seriatim* in the review of Dr Martin's paper already referred to, and therefore need not be repeated; but several of the more important may be dwelt on for a little.

Every man who has seen much of the kind of persons who apply to dispensaries and vaccine institutions must have an impression, perhaps indefinite, but still reasonable, that hereditary disease may be communicated by the channel of vaccination. Children are brought very properly to such institutions, manifesting distinct indications of *syphilitic* and *scrofulous* disease. Are these indications always recognised? and is lymph never taken from the arms of such children? My own belief is, that many mothers speak correctly when they tell us that their child was poisoned when it took the cowpock. I have seen such cases, and their existence cannot be doubted since the publication of Mr Jonathan Hutchinson's valuable series of cases in the fifth volume of the *Medico-Chirurgical Transactions.* This catastrophe is rendered impossible by animal vaccination. How important and satisfactory to be able to say that the lymph we are about to use was obtained either directly from a healthy animal or from the arm of a child only a few ascertainable removes from that original source!

Granting these advantages of bovine vaccination, how, it may be naturally asked, is the system to be carried out? Of course this implies a well-organized establishment, such as Dr Martin and his son possess at Boston, in Massachusetts, or as Dr Warlomont presides over at Brussels, in Belgium. At these institutions a sufficient herd of animals, kept separate from each other, is maintained under responsible and competent officials. The object aimed at by these enterprising men is so important and far-reaching, that instead of being left to the public spirit of individuals, it seems to deserve the recognition and support of Government. Dr Warlomont is permitted to call his institution "*L'Institut Vaccinale de l'Etat,*" but he continues to carry it on at his own expense, although the Government, for certain services rendered to the public, grants him a moderate annual subsidy.

We cannot doubt, however, that were the importance of animal vaccination fully realized, Government would establish and maintain such an establishment in connexion with the existing National Vaccine Institution of England, which has already done such admirable service.

The American establishment has been amply tested in several epidemics of smallpox, and found capable of supplying an indefinite amount of reliable vaccine virus for the vaccination and revaccination of the people. We in this country know too well that, on such occasions, there has been a fearful "vaccine famine," rendering it necessary to employ every drop of reliable lymph that could be drained out of perfect vesicles, and even to have recourse to the very doubtful products of revaccination vesicles and other vesicles which in ordinary times would be regarded as spurious and unsatisfactory. If this was done by honourable practitioners at their wit's end for lack of vaccine lymph, it is painful to think what shifts the unprincipled or the ignorant may have had recourse to. Surely this plea of abundant supply is in itself a powerful argument for *bovine* vaccination under Government control. Were this arrangement accomplished, the medical profession would have the important satisfaction of drawing the material for vaccination from a source thoroughly reliable and free from any risk of contamination.

I may mention that, having read Dr Martin's paper, and being impressed with the importance of the subject, I requested that gentleman to send me a supply of heifer lymph. It happened that when it arrived one of my grandchildren required to be vaccinated, and I deemed the opportunity a good one for employing it. I watched the case with much interest.

The lymph was taken by Dr Martin, on December 24th, 1878, from a heifer, '632' of his series. It was received in Edinburgh on the 13th of January 1879, and I employed a single bone point charged with it on the 15th. The child was two months and twenty-one days old.

On the third day two papulæ were observed in connexion with both points of insertion. On the fourth day four small vesicles had formed, two above and two below. On the sixth day each of the two pairs of vesicles had coalesced into one. On the seventh day these were considerably enlarged and quite characteristic. On the eighth day an areola surrounded both vesicles, an inch or thereabout in breadth. (Dr Husband, the Government vaccinator, called on this day at my request, and charged a single tube from the lower of the vesicles.) All this time there were no indications of febrile or constitutional disturbance. On the tenth day the vesicles were desiccating in the centre, and the areola fading. On the sixteenth day both vesicles were occupied entirely by a dense brown crust. The lower came off on the twenty-third day; the upper on the twenty-fourth. A little moisture exuded where the crusts had been for a day or two, and then left two deep but rather smooth cicatrices.

In the absence of any constitutional disturbance, Bryce's test might have been used with advantage, but was unfortunately overlooked.

On July 10th, 1879, I vaccinated another child, cousin of the preceding case, with the lymph taken by Dr Husband on January 23d. The lymph was quite limpid, and I inserted it at two points. On the fourth day there were two vesicles quite characteristic. On the sixth day I applied Bryce's test with lymph from one of the bone-points sent by Dr Martin, and also with the same revaccinated M. L., æt. 25, the child's nurse, who had been vaccinated satisfactorily—as I was informed—in infancy.

Three days thereafter, as no indications of the test succeeding appeared in either case, I revaccinated the nurse with lymph taken from one of the vesicles of the child, which were now thoroughly normal.

This revaccination succeeded perfectly, as if it had been a primary one; but I did not see the result myself, as the nurse and her child had gone to a distant part of the country. The crusts came from the little boy's arm on the twenty-third day after vaccination.

I have mentioned these cases with the view of counteracting the ill-founded prejudice that local irritation and febrile disturbance may be expected as the results of *animal* vaccination. The paper has served my purpose if it contributes, even in a small degree, to the calm consideration of what seems to me a subject of very great importance.

## ARTICLE III.—*Jugular Reflux and Tricuspid Regurgitation.* By GEORGE A. GIBSON, M.B., D.Sc. Edin., M.R.C.P.E.

THE condition of the cervical veins affords a sign of great importance in all affections involving the right side of the heart. In health, unless the individual be of very spare habit or have a somewhat transparent skin, these vessels are among the least observable of the venous tributaries. The reason of this is, that their proximity to the thorax brings them under the influence of forces which materially aid the venous circulation. Under certain conditions, however, the veins of the neck may assume a marked prominence. A prolonged expiration causes the external jugular veins to swell up, and during the strong expiratory efforts which take place in a fit of coughing, the posterior triangle becomes turgid, while the flushed face, congested eyes, and cyanotic lips tell the tale of venous stasis.

Closely related as the cervical veins are to the heart and great vessels of the thorax, those on the right side are more especially so, and are therefore more peculiarly liable to be affected by any changes in the thoracic viscera. The internal jugular vein of the right side of the neck lies nearly in a straight line with the vena anonyma dextra and vena cava superior, whilst the left innominate vein, besides uniting with its fellow almost at a right angle to form the vena cava, has also a course about three times as long; it is, therefore, strictly in accordance with the anatomical disposition of the parts that abnormal phenomena should manifest themselves earlier on the right than on the left side of the neck.

The valves at the proximal end of the external jugular veins are not so perfect as those guarding the internal jugular veins. Two reasons for this difference are obvious. In the first place, the external jugular veins are not so much in the direct line of the blood current, and can therefore be kept securely closed by structures of less strength than are required at the mouths of the internal jugular veins. In the second place, it is at once apparent that the brain would run a serious risk of congestion if the valves of the internal jugular veins were easily interfered with.

That the respiratory movements of the thorax influence the flow of blood in the veins was first made known by Valsalva. His experiments are described by Morgagni,[1] who tells us that on laying bare the jugular veins he observed them swell during expiration and collapse during inspiration. Haller[2] fully described the phenomena of the alternate rising and falling of the veins and brain, but it was left to Barry[3] to demonstrate the physical effects of respiration on the venous system. This he did by tying the jugular vein, opening it on the central side of the ligature, and inserting the end of a curved glass tube, the other end of which dipped into a vessel of coloured fluid. He found that with each inspiration the fluid rose; on expiration, it either remained quite stationary or sank a little. Poiseuille[1] subsequently repeated the experiments in greater detail, and found that in the jugular vein, with the valves intact, the only movement was towards the heart; but that when the tube was pushed past the mouth of the vessel into the innominate vein, the attraction and repulsion of the fluid with inspiration and expiration was nearly equal. More recently the subject has been thoroughly investigated by other physiologists, who have amply confirmed the results of Barry and Poiseuille with regard to this aspiratory action of the thorax.

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[1] *De Sedibus et Causis Morborum*, 1761, Lib. II., Epist. Anat. xix., art. 33.

[2] *Elementa Physiologiæ Corporis Humanis*, 1757-66, Lib. VI. sect. iv.

[3] *Experimental Researches on the Influence exercised by Atmospheric Pressure upon the Progression of the Blood in the Veins, &c.*, 1826.

There is less pressure on the blood contained in the vena cava and venæ anonymæ than on that in the veins of the neck—that is to say, that the former is under less than normal atmospheric pressure, or, in other words, is under negative pressure. During the act of inspiration there is a sudden lowering of pressure on all the contents of the thorax, and venous blood under atmospheric pressure flows in as well as air, to equalize as far as possible the intra- and extra-thoracic pressure. But even during expiration the pressure is less upon the intrathoracic veins than upon those of the neck, for the expiratory act, caused partly by the mechanical arrangements of the thoracic walls, but more especially by the elastic retraction of the lungs, still leaves the lungs in a state of tension, as proved by their collapse on opening the thorax, as well as by the experiments of Donders.[2] Although there is thus at all times an inferior degree of pressure upon the vessels within the thorax, the difference is not so great during expiration as during inspiration. With forced expiration, however, the case is different. Whenever the pressure on the veins within the thorax rises to be equal to or greater than that on the vessels outside—that is, becomes positive—there is a tendency to backward flow. This reflux, as pointed out by Hamernjk,[3] closes the valves of the jugular veins, and, as long as the thoracic exceeds the atmospheric pressure, keeps them closed; so that the blood returning from the periphery accumulates above and causes a swelling of the vessels. Hamernjk maintained that in health and with ordinary respiration the valves at the lower end of the cervical veins were always shut during expiration, but this view is untenable. All experience is against it, and it has been ably combated by Immermann,[4] who has written an admirable memoir on the subject.

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[1] *Journal universel et hebdomadaire de Médecine et de Chirurgie*, tome i., p. 289, and tome iii., p. 97.

[2] *Zeitschrift fur rationelle Medicin*, Neue Folge, III. Band, 287 s.

[3] *Physiologisch-pathologische Untersuchungen über die Erscheinungen an den Arterien und Venen*, u. s. w., 1847, s. 239, u. f.

[4] *Deutsches Archiv für klinische Medicin*, II. Band, iii. Heft, s. 327-s. 358.

Although absent in ordinary circumstances, this rhythmic closure of the venous valves and consequent swelling of the vessels always occurs during forced expiration, with dilated chambers and accumulation of blood on the right side of the heart, and in any affection lessening the elastic retraction of the lungs.

There is a natural provision for a slight escape of blood through the closed orifices of the right side of the heart. This imperfect closure appears to have been first observed by Hunter.[1] "The valves of the pulmonary artery," he says, "do not do their duty so completely as those of the aorta; and if we inject a pulmonary artery towards the right ventricle, it does not so completely hinder the injection passing into that cavity; nor are the two portions of injection completely separated, when the artery is injected from the ventricle, as in the left side. So far as respects injections, the same observations are applicable to the *valvulæ tricuspides;* therefore, I believe the valves of the right side of the heart are not so perfect as those of the left; from hence we may suppose that the universal circulation requires to be more perfect than that through the lungs." This passage is quoted in its entirety, as Flint[2] appears to claim for himself the priority of this observation as regards the pulmonary valves.

Little notice was taken of these facts of Hunter's until Adams[3] took up the subject and extended the observations. To him is due the merit of showing clearly that what is necessary towards the maintenance of the systemic would be positively injurious to the pulmonary circulation, where so many causes must temporarily retard the passage of blood through the lungs. He also pointed out that this natural imperfection of the tricuspid valves saves them from injuries to which the mitral valves are, from their unyielding nature, exposed, and from which organic disease frequently arises. King[4] entered freely into the subject, and explained the mechanism or "safety-valve action" by means of which he considered regurgitation to be allowed. These views were at one time stoutly opposed, especially, perhaps, by Blakiston,[5] who held that "it would not improve the chances of life, did nature thus attempt to relieve arterial congestion by means calculated to induce venous engorgement;" but this natural function of the valves of the right side is now nearly universally admitted, although Morison[6] appears to think otherwise.

In order to attain a somewhat correct estimation of the pressure necessary to cause incompetence of the valves of the right side of the heart, I have tested them in oxen, sheep, and men, by means of a long tube which brought a column of fluid to bear upon the respective valves. The fluid used was a solution of sodium chloride of 1050 sp. gr., at 98·5° Fahr. By cutting away the auricles, the auriculo-ventricular valves were exposed, and the tube, passed into the ventricle by the arterial orifice, with the artery tightly tied round it above, allowed the fluid to act upon the mitral and tricuspid valves respectively. By tying the tube into the aorta and pulmonary artery above the sigmoid valves, these were in turn tested. The hearts were experimented with from thirty-six to forty-eight hours after death, and in the case of human hearts these were from cases of surgical lesions or death from accident. I have never seen the healthy aortic valves incompetent, even with a very considerable column of fluid. The mitral valves once allowed a slender jet to escape with a column of fluid over six feet in height in the case of a man who died thirty hours after a severe gunshot wound, and whose endocardium was slightly congested, with a trace of lymph on the valves and cords.

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[1] *A Treatise on the Blood, Inflammation, and Gunshot Wounds*, Part I. chap. ii. sect. 7, 1794.

[2] *A Text-Book of Human Physiology*, chap. ii: 1876.

[3] *Dublin Hospital Reports*, vol. iv. pp. 353–453.

[4] *Guy's Hospital Reports*, vol. ii. pp. 104–162.

[5] *Practical Observations on certain Diseases of the Chest, and on the Principles of Auscultation*, chap. xi.: 1848.

[6] *Edinburgh Medical Journal*, 1879–80, p. 626.

As the mean of the results obtained, I may state that from the semilunar valves of the pulmonary artery of the sheep a strong jet escaped until the column of fluid reached 14½ inches, from which height it trickled until the valves became competent with a column of 9 inches. In the ox a strong jet was emitted down to 12 inches, and dropping of the fluid reduced the superincumbent column to the height of 6 inches, when competence was established. In the healthy human heart a jet escaped down to 13 inches, and the valves were competent with 8 inches of fluid resting on them. Now, in each case of the pulmonary valves, with a column of fluid exceeding 6 feet in height, perfect competence was obtained in a very simple manner by constricting the pulmonary artery. A cord tied round the artery exactly at the attachment of the valves gave the means of perfect control over the escape, so that, by varying the amount of tightening, the jet was converted into a drop falling quickly or slowly, and this in turn was totally stopped. The whole diminution of circumference only amounted to a few lines. This shows clearly that the escape is caused by distention of the elastic artery, and relative incompetence of the valves.

From the tricuspid valves of the sheep a strong triangular jet spouted out, with a column of fluid over 13 inches in height, and from this point the fluid slowly escaped by flowing over the valves until all escaped. In the ox the jet ceased when the column of fluid fell to 10 inches, and from this point the fluid likewise ran out. In the healthy human heart the triangular jet gushed out until there were 12 inches of fluid left, and then the remainder flowed over the valves. The valves closing the right auriculo-ventricular orifice, therefore, seem always incompetent after death. Now, it is quite evident that experiment on the heart after death cannot be applied rigidly in explanation of action before death, yet a certain amount of light may be thrown thereby on it. Such experiments show with certainty that the orifices of the right side of the heart are not closed so perfectly as those of the left, and point to the ease with which they probably allow escape with any supernormal pressure. It is hardly possible to overestimate the advantages due to this provision. When the lungs are unable to receive their normal supply of blood, the safety-valve action lowers the pressure and extends the venous reservoir backwards to the venous valves, thereby preventing grave disaster to the respiratory organs, and possibly failure of the heart.

When there is a continuance of the reflux, so that the intravenous pressure has been for some time positive, the veins become dilated and the valves incompetent, so that a new train of appearances follows in the peripheral veins.

Restricting our attention solely to the cervical veins, we may recognise several conditions.

1. Vibratory tremors transmitted along the distended veins from the dilated auricle, or, in its paralysis, from the closure of the tricuspid valve.

2. Undulatory waves synchronous with the respiratory movements in health with forced breathing, or in thoracic disease.

3. Oscillatory waves coinciding with the cardiac movements in health, either after violent exertion or after deep emotion, causing excessive action of the heart, or in disease. These three conditions are, of course, caused by shutting of the venous valves by positive intrathoracic venous pressure, which dams back the returning blood. It is easy to demonstrate that there is no reflux by pressing the finger upon the external jugular vein, about the middle of its course, when the inferior part is found to remain empty.

4 Reflux waves, with incompetent venous valves, and always, I believe, caused by tricuspid regurgitation. This condition is easily distinguished from the preceding by constricting the vein about midway between the lower jaw and the clavicle, when the distinct waves are seen chasing each other up to the finger.

5. Motionless distention caused by great intravenous pressure, and pointing to grave disease. This condition is to be most carefully distinguished from the temporary swelling of the veins brought about by transitory hindrance to the passage of the blood through the healthy lungs. This latter state of the veins, however, is so evanescent that it could hardly be mistaken for the former. A great degree of increased pressure is shown in the case of persistent distention; for if the vein be compressed high up, and the blood be driven out by running another finger down the vessel, there is an immediate return of blood from below when the second finger is removed. An appearance similar to this may occur as an early stage of venous reflux, before the venous valves have succumbed to the positive pressure of the innominate veins. In this case the

valves are shown to be competent by driving the blood out as above, when it is found not to return from below. The positive pressure in the innominate vein very rapidly dilates the jugular veins and causes incompetence of their valves; indeed, Friedreich[1] has observed the development of jugular reflux in a single night.

In this paper attention will only be directed to the fully developed jugular reflux, the fourth of the five conditions above enumerated. The so-called "bulbar pulse," which may be regarded as an early stage or a minor degree of the same condition, will be passed over, and no notice will be taken either of the "jugular-valve-sound" or "jugular-valve-murmur," as the aim of this paper is to discuss the relation of jugular reflux to tricuspid incompetence.

The earliest notice of so-called "venous pulsation," the "arteriosity of veins," as it is termed by Testa,[2] is usually attributed to Lancisi; but it was observed by Galen, as we are informed by Morgagni,[3] well-nigh sixteen centuries earlier. Attention was not again drawn to it until the time of Homberg,[4] who, in spite of what has been said to the contrary, really grasped the significance of the condition. No matter though Homberg had some peculiar ideas about the action of the arteries, and attributed dilatation of the heart to the existence of polypi growing from the inside of its walls into the arteries, he at any rate saw clearly that the cardiac dilatation was the cause of the venous movement. Let us refer for a moment to his own words. He says, "Cette dilatation étant douloureuse au cœur en a causé des contractions convulsives, ce qui faisoit sans doute la palpitation du cœur: ces contractions convulsives s'étant jointes aux contractions naturelles du cœur, ont comprimé le sang contenu dans les cavités plus violemment que par les seules contractions naturelles: ces violentes contractions ont repoussé par secousses le sang dans les veines, leurs valvules étant forcées par l'effort violent dont le cœur les pressoit; ce sang repoussé par secousses dans les veines les a gonflées par intervalles, en conservant fort sensiblement les impressions de ces secousses, ce qui a unité dans les veines une pulsation approchante de celle que l'on sent aux artères." Nothing could be more explicit than this, and his comparison of the reflux wave and the swelling of a tidal river is extremely apposite.[5]

Lancisi quotes Homberg in his classic work,[6] and shows that the escape of blood through the dilated right orifice is the cause of the venous reflux. It is curious to find him stating that the frequency of venous reflux in spanæmia is caused by dilatation of the right side of the heart, owing to the inability of the *thick* blood to circulate in the lungs.

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[1] *Handbuch der speciellen Pathologie und Therapie*, V. Band, ii. Abth., 1 Lief, § 43, 2 Aufl., 1867.

[2] *Delle Malattie del Cuore, loro Cagioni, Specie, Segni, e Cura*, 1810-11, Tomo III. capo xvii. § 3.

[3] *Op. cit.*, Epist. Anat. xviii. art. 10.

[4] *Histoire de l'Academie Royale des Sciences*, année 1704, pub. 1707; Memoires, pp. 218-223.

[5] *Op. cit.*, p. 221.

[6] *De Motu Cordis et Aneurysmatibus.* Pars. II., Lib. II. cap. vi. prop. 57 : 1728.

Morgagni[1] informs us that the "sign proposed by Lancisi" frequently indicates dilatation of the right ventricle, but sometimes "vitium aliquod, cujus aut sedes in cavis dextris cordis si, taut effectus ad hæc attineat sic ut circumitio sanguinis per dextram cordis partem secundum naturam non perficiatur." He appears also to recognise two impulses in venous reflux, one anterior to, and the other agreeing in time with the ventricular systole; the former he points out as due to the auricular contraction, and the latter as caused by regurgitation from the ventricle.

Senac[2] is entirely incomprehensible, for, after fully describing the manner in which it is possible for venous reflux to appear, he says that those who believed in its existence must have been the victims of an illusion.

Corvisart[3] does not admit jugular reflux to be a certain sign of dilatation of the right side, for the two reasons that, firstly, often after death had followed the existence of this sign, disease of the *left* side had been found; and, secondly, the venous movements might be so easily confounded with those of the arteries. He, therefore, only allows a presumptive value to this sign, as being, along with others, useful in leading to a suspicion with regard to the side affected.

Burns[4] holds that, with disease of the right side of the heart, venous reflux only appears during exertion or excitement, and asserts that in some manner unexplained the ventricles accommodate the blood to the vessels even when the heart is dilated.

Kreysig[5] says that the movement in the veins of the neck is often only an apparently real reflux caused by repercussion of the blood, but that in many cases it is the result of dilated communication between the right auricle and ventricle.

Laennec[6] is confident that constant swelling of the jugular veins without sensible movement is the most persistent *equivocal* sign of right-side dilatation, and then goes on to say that venous reflux had invariably been present in every case of considerable hypertrophy of the right ventricle under his observation. After quoting the case of Hunauld (probably a mistake for Homberg), he concludes, "On peut donc regarder ce symptôme, toutes les fois qu'il existe, comme un signe propre au moins à faire soupçonner l'hypertrophie du ventricule droit."

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[1] *Loc. cit.*

[2] *Traité des Maladies du Cœur*, 1778, tome i. chap. viii. art. x.

[3] *Essai sur les Maladies et les Lesions Organiques, du Cœur et des Gros Vaisseaux*, 1806, Deuxième classe, chap. iii.

[4] *Observations on Some of the Most Frequent and Important Diseases of the Heart*, etc., 1809, pp. 51, 52.

[5] *Die Krankheiten des Herzens*, 1814, I. Bd., iii. cap.

[6] *Traité de l'Auscultation Médiate et des Maladies des Poumons et du Cœur*, 1819, section ii. chap. iii.

Bertin[1] tells us that this sign is only to be observed in cases of hypertrophy of the right side, where also the auriculo-ventricular orifice is so dilated as not to be closed by the tricuspid valves. This writer, while pointing out that venous reflux is always regurgitant, shows that the real cause of disturbance may be elsewhere, as in mitral or aortic disease, in which case the dilatation is a secondary, and in some degree a symptomatic affection, to be classed, therefore, by the side of the passive infiltrations and dropsies.

Gendrin[2] says that when a venous reflux exists it may safely be affirmed that considerable contraction of the right auriculo-ventricular orifice is accompanied by inocclusion of the valves guarding it.

Jugular reflux is accepted as a certain sign of tricuspid regurgitation by Adams,[3] Benson,[4] Latham,[5] Skoda,[6] Bellingham,[7] Stokes,[8] Bamberger,[9] Parrot,[10] Blakiston,[11] Hayden,[12] and Balfour.[13]

All these writers grant that movements of the cervical veins may take place quite normally from the shock of the cardiac systole or arterial pulsation, or from other causes; but they do not allow that venous reflux can occur except in tricuspid incompetence. No doubt tremulous movements are communicated to the blood in the cervical veins in every case when the auricle, vena cava, innominate vein, and jugular bulb are surcharged with blood. Here the movements may be caused by auricular contraction, which imparts a slight shock to the column of blood; or if the auricle be paralyzed, this fluctuation is absent, and only the succeeding impulse due to ventricular systole is present. This latter condition is carefully stated by von Dusch,[14] who says, "Aus den vorstehenden Erörterung geht hervor, dass pulsirende Bewegungen an den Halsvenen unter allen Umständen eintreten können, welche eine stärkere Anfüllung der Obern Hohlvenen und des Bulbus zur Folge haben, sobald dabei die Contractionen des dilatirten rechten Vorhofs ungenügend werden.

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[1] *Traité des Maladies du Cœur et des Gros Vaisseaux*, 1824, liv. ii. sect. ii. chap. ii.

[2] *Leçons sur les Maladies du Cœur et des Grosses Artères*, 1841-2, leçon vii.

[3] *Loc. cit.* [4] *Dublin Journal of Medical Science*, vol. viii. p. 324.

[5] *Lectures upon Subjects connected with Clinical Medicine, comprising Diseases of the Heart*, 1845-6, vol. ii. sect. xxxiii.

[6] *Zeitschrift der kais. kön. Gesellschaft der Aerzte zu Wien*, IX. Jahrgang, I. Band.

[7] *A Treatise on Diseases of the Heart*, 1853-7, vol. i. chap. v.

[8] *The Diseases of the Heart and the Aorta*, 1854, chap. ii.

[9] *Lehrbuch der Krankheiten des Herzens*, 1857; I. Abschnitt.

[10] *Archives Générales de Médecine*, vi. série, tome v. p. 385 et p. 550.

[11] *Clinical Observations on Diseases of the Heart and Thoracic Aorta*, 1865, chap. xii.

[12] *The Diseases of the Heart and Aorta*, 1875, chap. vi. and chap. vii.

[13] *Clinical Lectures on Diseases of the Heart and Aorta*, 1876, lect. vii.

[14] *Lehrbuch der Herzkrankheiten*, 1868, s. 80.

Schwacher Venenpuls am Halse kann sowohl bei sufficienten als insufficienten Klappen des Bulbus beobachtet werden; starker Venenpuls entweder auf den ausgedehnten Bulbus beschränkt, oder über denselben hinaus mehr oder minder weit verbreitet, wird dagegen wohl immer auf Insufficienz der Valvula tricuspidalis und der Bulbusklappen bezogen werden müssen." This passage clearly shows, also, that Von Dusch does not admit the causation of jugular reflux otherwise than by tricuspid incompetence. Precisely in the same way does Hayden[1] allow the existence of non-reflux movements in the veins of the neck, communicated to them along the engorged great veins. Indeed, Longet,[2] following Potain, describes two impulses normally occurring in the jugular veins, the first arising from a slight stoppage during auricular contraction, and the second caused by closure of the tricuspid valve or by lateral pressure upon the great veins from their proximity to the distended arterial trunks.

Jugular reflux is not allowed to be pathognomonic of tricuspid regurgitation by Hope,[3] Hamernjk,[4] Walshe,[5] Wachsmuth,[6] and Friedreich.[7] Hope attributes the venous movement to the recoil of the tricuspid valve during ventricular systole, and says that if there were regurgitation it would be attended by "a bellows or other such sound." Hamernjk thinks that the blood lying between the partially closed tricuspid valves is driven backwards, and also that the valves are bulged out into the auricle during ventricular systole. To these two causes he would attribute venous movements, and he informs us that when the ostium venosum dextrum is dilated the waves only differ in degree. Friedreich asserts that the lateral pressure of the aorta upon the venous trunks is the cause of venous reflux in perfect health, but freely grants that the impulses in such a case are much feebler than when the right auriculo-ventricular orifice is dilated.

During the last three years I have been privileged to study a great many cases in which this sign was a prominent feature. All of these cases of which I was able to collect full details are arranged in the accompanying tables.

The cases are arranged etiologically in thirteen classes, according to the cause of the cardiac dilatation and venous reflux.

The first class contains cases in which strain of the heart had brought on the cardiac affection. Secondly is a case whose cause could only be laid down as a neurosis induced by excess in tobacco, alcohol, and venery. Next come two instances of exophthalmic goitre. In the fourth class are grouped cases of dilatation caused by debility arising in various ways. Such cases are of course spanæmic, but are kept distinct from the fifth class, in which the spanæmia is idiopathic. This fifth class in its turn might, as is usually done, be associated with the one which follows. In this latter class, however, the spanæmic condition is accompanied by hypoplasia, and is therefore called that of chlorosis. Heart disease in its various forms occupies the next three classes. In the three following there are assembled under the name of bronchitis, without distinction, cases of bronchitis, asthma, and emphysema; and in the tenth and eleventh classes such affections are complicated by the presence of heart disease and dilatation of the aorta. The last class is that in which dilatation is secondary to phthisis.

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[1] *Loc. cit.*

[2] *Traité de Physiologie*, 1869, tome ii. p. 250.

[3] *A Treatise on the Diseases of the Heart and Great Vessels*, 1832, Part III. chap. i.

[4] *Op. cit.*, s. 253, u. f.

[5] *A Practical Treatise on the Diseases of the Heart and Lungs*, 1851, Part I. chap. ii.

[6] *Zeitschrift für rationelle Medicin*, Neue Folge, IV. Band, ii. Heft, ss. 182–218.

[7] *Op. cit.* § 43 and § 44, and *Deutsches Archiv für klinische Medicin*, I. Band, iii.-iv. Heft, s. 241-s. 291.

After giving the sex and age of each patient, the position of the apex-beat measured from midsternum is stated. The right border of the heart is only of use in giving some idea as to the position of the right auricle, and is omitted. Auscultatory evidence is given under the heading of the respective areas, and when nothing is noted the sounds were normal.

The relative frequency of causation, as arranged in the foregoing tables, is—1. Mitral disease, 25 cases; 2. Bronchitis, 19 cases; 3. Mitral disease with bronchitis, 8 cases; 4 and 5. Spanæmia and phthisis, 6 cases respectively; 6 and 7. Debility and chlorosis, 4 cases respectively; 8. Strain of heart, 3 cases; 9, 10, and 11. Exophthalmic goitre, aortic disease, and aortic with mitral disease, 2 cases respectively; 12 and 13. Neurosis and dilatation of the aorta with bronchitis, 1 case respectively.

Now, a very large number of these cases do not present a murmur audible over the tricuspid area. In the first class one case has a pure, one an impure first sound, and one a systolic murmur in that area. The solitary case in class two has a clear first sound there. Of the two cases placed in the next class one has a pure first sound, and the other a systolic murmur in the tricuspid area; and in the fourth class one case alone has a systolic murmur, the other three having pure first sounds. Of the six spanæmic cases two have pure, two impure first sounds, and two systolic murmurs. The next class affords two cases with pure first sounds and two with systolic murmurs in the tricuspid area. The two cases of aortic disease have pure tricuspid sounds, while the following two cases of aortic with mitral disease have murmurs. The large class of cases caused by mitral disease shows ten instances of pure first sound, three of impurity of that sound, and twelve of systolic murmur in the tricuspid area; and in the class containing cases of mitral disease with bronchitis one has the first sound pure, four have it impure, and three have systolic murmurs. Among the cases of bronchitis eleven have clear first sounds, four impure first sounds, and four systolic tricuspid murmurs; and in the final class of cases due to phthisis four have pure sounds, and two have systolic murmurs in the tricuspid area. The sole case of dilatation of the aorta with bronchitis has an impure first sound over that area. Of the whole eighty-three cases, therefore, in the tricupsid area, there are thirty-eight instances of pure first sound, fifteen of impure first sound, and thirty of systolic murmur.

Now, putting aside the examples of impurity of first sound, is there or is there not tricuspid regurgitation in the thirty-eight cases where the first sound is perfectly normal over the tricuspid area? And further, is a tricuspid systolic murmur the only unequivocal sign of tricuspid regurgitation? Undoubtedly there is tricuspid regurgitation in all of these cases, for a murmur is by no means the most certain sign of any valvular affection. Patients have been shown as cases of mitral incompetence, and in whom systolic apical murmurs have been audible, and yet at subsequent autopsies evidence of unsuspected dilatation of the right ventricle, with incompetence of the tricuspid valve, have been found alone. And, again, tricuspid murmurs have been heard now and then in patients who presented no other sign of dilatation of the right side, and in whom no cause of such dilatation could be found,—post-mortem examination in such cases revealing no more than the normal amount of tricuspid incompetence, but sometimes incompetence of the mitral valve. In such cases the murmur may have been due to some transitory interference with respiration, or it may have been conducted from the mitral orifice. Moreover, we occasionally hear of exocardiac being mistaken for endocardiac murmurs; and, besides, true valvular murmurs have, as Sanders[1] points out, a great tendency to disappear and reappear. It is therefore clear that murmurs have not the paramount importance which is claimed for them, and never can outweigh the consideration of the entire evidence gathered from all other sources.

Of other evidence, alterations of form and change of size, along with modification of cardiac impulse, are very important. In dilatation of the right ventricle the transverse measurement of the cardiac area becomes enlarged. The apex-beat, instead of being in the fifth intercostal space, two inches from the left edge of the sternum, may be situated considerably farther from the middle line, and may be raised so as to strike the fifth rib, or even to occupy the fourth interspace; or it may wholly disappear, and give place to a diffuse impulse at the lower part of the sternum. When this is the case percussion invariably proves that the heart is enlarged transversely.

At one place[2] Friedreich states that the venous reflux not unfrequently occurs with perfectly normal hearts, and he attributes its causation to some transitory cause, such as temporary bronchial catarrh, which, by increasing the intrathoracic pressure, has brought about incompetence of the venous valves, so that the lateral pressure by the aorta upon the venous trunks causes distinct reflux waves. In many of these cases of reflux with normal hearts he imputes the blame of setting up reflux to great disturbance of nutrition, profuse loss of blood, extreme degree of debility, or other cognate condition inducing want of tone in the vessels, which allows insufficience of the venous valves more easily, insufficience which he says is cured so soon as the general state is so far improved as to restore the vessels to their normal tone. It appears to me that there are two fallacies here. In the first place, the general conditions referred to are just those which we know so well as causes of weakening of the muscular structure of the heart, and of relative incompetence of the valves; and, secondly, the fundamental character of the veins is their great elasticity. It is a well-known fact that veins do not rupture with a strain to which arteries of corresponding size succumb at once, and further, that the elastic property of veins causes them to contract upon the contained blood so as to accommodate themselves to it. Quite recently Lauder Brunton[1] has called attention to this quality.

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[1] *Edinburgh Medical Journal*, 1868-9, p. 584.

[2] *Virchow's Handbuch*, *loc. cit.*

In another place[2] five cases of venous reflux are detailed by Friedreich, none of which he believes to have existed along with tricuspid incompetence. One was a case of anaemia with severe cough; the second had suffered from fever and long-continued cough; the third was pregnant, and suffered from catarrh of the larynx and bronchi; the fourth had obliterated pericardium with chronic myocarditis; and the last was a case of pleuro-pneumonia and pericarditis. The fourth of these patients died, and at the autopsy no evidence of dilatation of the right auriculo-ventricular orifice was found. Nothing, however, is reported as to the relation of the valves to the orifice. No measurements of the cardiac area were taken during life, so its transverse diameter in any case is unknown. In each of these instances there certainly was ample cause for tricuspid regurgitation, and to my mind there is sufficient proof of its existence. In taking up the views of Friedreich, they may be regarded as in some sort an embodiment of the other authors quoted, so that no further reference need be made to them. Of the eighty-three cases tabulated only two have no enlargement of the cardiac area, and of these one has, strange to say, a systolic tricuspid murmur, while the other is a case of phthisis. In fact, jugular reflux, whether with or without enlargement, might be regarded as pathognomonic of tricuspid regurgitation, were it not for one or two isolated cases caused otherwise.

Reisch[3] narrates a case in which there existed signs of mitral

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[1] *Medical Press and Circular*, N.S., vol. xxviii. p. 1.

[2] *Deutsches Archiv für klinische Medicin, loc. cit.*

[3] Quoted by Von Dusch, *op. cit.*, s. 80 s. 81.

|  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] |  | Redup. 2d<br>Redup. 2d |  | Recent [illegible]<br>Strain [illegible]<br>Recent [illegible] |
| [illegible] | [illegible] |  |  |  | Redup. 2d |  | [illegible] |
| [illegible] | [illegible] | [illegible] | Syst. mu<br>Syst. mu |  |  | Syst. mu | Goitre [illegible]<br>Great [illegible]<br>Great [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] |  | Redup. 2d | Syst. [illegible]<br>Syst. [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] |  | Redup. 2d<br>Redup. 2d<br>Redup. 2d | Syst. mu<br>Syst. mu<br>[illegible] |  |
| [illegible] | [illegible] | Syst. [illegible]<br>Syst. [illegible] | [illegible] |  | Redup. 2d<br>[illegible] 2d | Syst. [illegible]<br>Syst. [illegible]<br>Syst. [illegible]<br>Syst. [illegible] | [illegible] |
| [illegible] | [illegible] |  | Ringing 1st<br>Impure 1st | [illegible] last [illegible]<br>[illegible] last [illegible] |  |  | [illegible] |
| [illegible] | [illegible] | Syst. [illegible]<br>Syst. [illegible] | Syst. mu<br>Syst. mu | [illegible] |  | Redup. 2d | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] |  | Redup. 2d<br>Redup. 2d<br>Redup. 2d<br>Redup. 2d | Syst. [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | Acc. 1st and syst. mu<br>Syst. mu<br>Syst. mu<br>Syst. mu<br>Syst. mu<br>Syst. mu<br>Syst. mu<br>Syst. mu |  | Redup. 2d<br>Redup. 2d<br>Acc. 2d | Syst. mu<br>Syst. [illegible]<br>Syst. [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] mu and acc. 2d |  |  |  |
| [illegible] | [illegible] | Impure 1st<br>[illegible]<br>Syst. [illegible]<br>Syst. [illegible] | Ringing 1st<br>Impure 1st<br>Impure 1st<br>Acc. 1st<br>Acc. 1st |  | Acc. 2d<br>Redup. 2d<br>Redup. 2d<br>Redup. 2d<br>Redup. 2d<br>Acc. 2d<br>Redup. 2d<br>Acc. 2d |  | Great epigastric [illegible]<br>[illegible]<br>Great epigastric impulse |
| [illegible] | [illegible] | Syst. mu<br>Syst. mu | Syst. mu<br>Syst. mu |  | Redup. 2d<br>Redup. 2d<br>Redup. 2d | Syst. mu<br>Syst. mu | Great epigastric [illegible] |

| | No. | Sex. | Age. | Apex. | Tricuspid. | Mitral. | Aortic. | Pulmonary. | Auricular. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|
| CLASS 1.<br>Strained Heart. | 1 | m. | 16 | 4½ | Ringing 1st. | Clear 1st. | . | Redup. 2d. | ... | Recent strain. |
| | 2 | m. | 41 | 4½ | Impure 1st. | Impure 1st. | | ... | ... | Strain few years ago. Ill ever since. |
| | 3 | m. | 17 | 3 | Syst. mur. | ... | | Redup. 2d. | .. | Recent strain. |
| CLASS 2.<br>Cardiac Neurosis. | 4 | m. | 22 | 3 | ... | ... | | Redup. 2d. | ... | Smokes and drinks much. Very immoral. |
| CLASS 3.<br>Exophthalmic Goitre. | 5 | f. | 14 | 3½ | ... | Syst. mur. | | ... | Syst. mur. | Goitre enlarging. Eyes normal yet. Great palpitation. |
| | 6 | m. | 41 | 4 | Syst. mur. | Syst. mur. | . | .. | ... | Great exophthalmos. Severe palpitation |
| CLASS 4.<br>Debility. | 7 | m. | 33 | 1¼ | ... | .. | . | Redup. 2d. | ... | Long-continued dysentery. |
| | 8 | f. | 30 | 3¼ | ... | .. | ... | ... | ... | Lactation, menorrhagia, and leucorrhœa |
| | 9 | f. | 30 | 4 | ... | ... | .. | ... | Syst. mur. | Puerperal debility and leucorrhœa. |
| | 10 | f. | 28 | 3¼ | Syst. mur. | Syst. mur. | . | ... | Syst. mur. | Miscarried during typhoid fever. |
| CLASS 5.<br>Spanæmia. | 11 | f. | 24 | 3½ | . | Acc. 1st. | | Redup. 2d. | Syst. mur. | |
| | 12 | f. | 15 | 3½ | . | Acc. 1st. | .. | Redup. 2d. | Syst. mur. | |
| | 13 | f. | 16 | 3½ | Impure 1st. | Impure 1st. | | ... | Syst. mur. | |
| | 14 | f. | 12 | 3¼ | Impure 1st. | Impure 1st. | | Redup. 2d. | Syst. mur. | |
| | 15 | f. | 25 | 3¼ | Syst. mur. | Syst. mur. | | ... | Syst. mur. | |
| | 16 | f. | 16 | 3 | Syst. mur. | Syst. mur. | | ... | Syst. mur. | |
| CLASS 6.<br>Chlorosis. | 17 | f. | 23 | 3½ | ... | ... | | ... | Syst. mur. | Very small. Sister had rheumatic fever. |
| | 18 | f. | 17 | 2½ | .. | . | | Redup. 2d. | Syst. mur. | Very small. Mother rheumatic. |
| | 19 | f. | 13 | 3 | Syst. mur. | Impure 1st. | | Redup. 2d. | Syst. mur. | Very small. Parents rheumatic. Chorea |
| | 20 | f. | 16 | 3 | Syst. mur. | Syst. mur. | | ... | Syst. mur. | Very small. Father rheumatic. |
| CLASS 7. | 21 | f. | 38 | 4 | .. | Ringing 1st. | Syst. and diast. mur. | .. | .. | Had rheumatic fever. |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | Syst. and diast. mur. | [illegible] | [illegible] | Great epigastric impulse. Had rheumatic fever. |
| | 73 | m. | 42 | 4½ | Syst. mur. | ... | | ... | ... | |
| | 74 | f. | 59 | 2½ | Syst. mur. | ... | . | .. | . | |
| | 75 | f. | 44 | 4 | Syst. mur. | ... | | Acc. 2d. | | |
| | 76 | f. | 29 | 3½ | Syst. mur. | Acc. 1st. | | ... | . | |
| | 77 | f. | 33 | 3½ | Syst. mur. | Acc. 1st. | | | .. | |
| CLASS 13.<br>Phthisis. | 78 | m. | 20 | 4 | ... | ... | ... | ... | ... | Great epigastric impulse. |
| | 79 | m. | 19 | 3½ | . | ... | . | Redup. 2d. | .. | |
| | 80 | m. | 24 | 2½ | . | ... | | Redup. 2d. | ... | |
| | 81 | f. | 25 | 2½ | ... | Syst. mur. | ... | ... | Syst. mur. | |
| | 82 | f. | 50 | 3½ | Syst. mur. | Syst. mur. | . | ... | ... | |
| | 83 | m. | 14 | 1 | Syst. mur. | ... | .. | Redup. 2d. | Syst. mur. | |

incompetence along with a well-developed venous reflux in the neck, where after death he found the mitral valves incompetent, along with a patent foramen ovale. An exquisite jugular reflux is also recorded by Von Dusch,[1] which depended upon a communication between the aorta and superior vena cava. In such very rare cases the reflux is, of course, not of tricuspid origin.

Another reflection is suggested by a consideration of the foregoing table. It is often asserted that tricuspid incompetence causes the disappearance of any previous accentuation of the second sound in the pulmonary area, as well as of reduplication of the second sound. It must of necessity modify the second sound by lowering the pressure within the pulmonary circulation, which lowering lessens the accentuation; but, as Balfour[2] writes, "it never does and never can altogether remove it, because the essential cause of the production and maintenance of tricuspid regurgitation is increase of the blood-pressure within the pulmonary circuit; so long, therefore, as tricuspid regurgitation persists, the pulmonary second sound will be always accentuated relative to its normal and to the aortic second, which from the same cause must be enfeebled." In the same way reduplication of the second sound cannot be abolished by tricuspid regurgitation unless this so far lowers the pulmonary blood-pressure as to become itself considerably diminished. There are twenty-three cases with reduplicated second sound among the total of eighty-three in the table, and it is well worthy of note that of these twenty-three only five presented a systolic tricuspid murmur, while eighteen had no such murmur at all. This can only mean that the reduplicated second sound is much less frequent when the tricuspid regurgitation has a distinct murmur.

Finally, a few words may be said with regard to the diagnostic uses of jugular reflux. It has been shown above that the majority of physicians believe it to be a pathognomonic sign of tricuspid regurgitation. None of Skoda's views save this need be referred to here, except his fourth deduction, that gradual swelling of the veins of the neck, followed by their sudden collapse, is a sign of paralysis of the right auricle. This same appearance of sudden collapse is attributed by Friedreich[3] to obliteration of the pericardium. Roy[4] takes the venous impulses as the best key in those rare cases of double heart action where the two ventricles appear to be endowed with independent action.

NOTE.—*The reduplication of the second sound, though audible in every case in both the aortic and pulmonary areas, has been placed solely under the latter head in the accompanying table, to avoid confusion.*

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[1] *Loc. cit.*

[2] *Op. cit.*, lect. vii.

[3] *Virchow's Archiv*, XXIX. Band, iii. Heft, s. 296, u. f.

[4] *Edinburgh Medical Journal*, 1877-78, pp. 594-605.

## ARTICLE IV.—*Case of Resuscitation of New-born Infant.* By ROBERT BRUCE, M.D.

(*Read before the Edinburgh Obstetrical Society, 25th February* 1880.)

CASES where resuscitation of the still-born infant is called for are not very uncommon, and in many instances no great difficulty is experienced in effecting that object. At other times, again, this is a much more difficult process, and requires considerable perseverance in the use of the ordinary well-known measures before it can be accomplished. But there are cases met with now and then apparently so hopeless, that we may well put to ourselves the question whether there is any use in attempting to resuscitate, and where the ordinary expedients we are accustomed to employ so successfully would in all probability meet with nothing but failure. Two such instances I related to this Society on a former occasion (see Vol. IV. of the *Transactions*), and I now bring forward another case of a somewhat similar nature.

On 27th January last I was called to attend a patient in her confinement. The labour was lingering, though not by any means difficult; the delay took place in the first stage merely from inefficiency of the pains and the long intervals between them. Rupturing the membranes not being attended by any beneficial result, recourse was had to the short forceps, and delivery easily effected. There having been no difficulty in the labour and no delay in the second stage, I was rather surprised to find that the child made no effort whatever to respire; and after rapidly severing the cord no signs of life could be discovered, even the fingers pushed upwards under the ribs having failed to detect any pulsation of the cardiac organ. Under these circumstances the question came to be whether there was any use of attempting artificial respiration. I decided to give the child the benefit of the doubt; and considering that it would be losing valuable time to try the usual means first, I at once introduced the curved tube which I now show you, and which was specially made for the purpose, into the larynx of the infant, and carried on artificial respiration by alternately blowing in air and compressing the thoracic walls. Minute after minute passed, with no apparent result except the sound of air passing out of the lungs on depressing the chest walls. Notwithstanding my apparent want of success I still persevered, and at last (in about ten minutes, as nearly as could be reckoned) was rewarded by discovering that the heart was now perceptibly beating. Though encouraged thus far, there was not yet the slightest appearance of natural respiration commencing. However, it seemed to me that there was rather less of the death-like paleness in the countenance, and after some minutes longer of suspense a solitary inspiration took place, which was followed after a considerable interval (probably about two minutes) by another, then once again after a similar interval. This state of matters continued for some time, the intervals gradually becoming shorter, until at length, after thirty-five minutes had elapsed, I was enabled to suspend my efforts, natural respiration having become fully established. So far the resuscitation was a complete success, and I felt very much gratified by the result; but unfortunately, although to all appearance a fine plump infant, weighing fully ten pounds, there seemed to be something not quite right about it: it never cried, and would not attempt to suck; its jaws were stiff, and the mouth could not be opened wide. For a day or two it moaned almost constantly, and one day had several slight convulsive seizures. It never seemed to move its limbs, remaining rather in a passive condition. Swallowing was attended with difficulty, but this improved afterwards, and it even sucked a little on the tenth day; but this amendment did not continue, and death took place that evening rather suddenly, after passing some blood by the bowels. It may be added that very little urine was passed during the whole period of its existence. Unfortunately, no post-mortem examination could be obtained.

*Remarks.*—The chief point of interest in this case, and my reason for bringing it under the notice of this Society, is the fact of suspended animation having been restored where no pulsation of the heart could be detected,—the cases formerly related by me having come under a different category, for in both the heart could be felt to beat more or less distinctly, and the introduction of a tube into the larynx was called for by the failure of the ordinary measures made use of in the first instance. Cases of resuscitation where no cardiac pulsation can be detected are, I believe, very uncommon, and at one time I used to consider it rather a work of supererogation to make any attempt in that direction. The result achieved here proves that success is within the bounds of possibility, and ought to encourage us to persevere in the use of similar means unless we are satisfied from the circumstances of the case that life is certainly extinct.

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## ARTICLE V.—*On the Rate of Cooling of the Human Body after Death.* By J. WILKIE BURMAN, M.D., Edinburgh; Late Medical Superintendent, Wilts County Lunatic Asylum, Devizes.

IN the *British Medical Journal* for March 28th, 1874, I, very shortly, drew attention to this subject, and to the medico-legal importance attaching to its proper and accurate estimation. I am now desirous of placing on record some notes of observations since made by me on the subject, and which have been brought to a premature conclusion by my no longer having the necessary facilities for continuing them. Such as they are, however, and imperfect though they may be, I trust they may be deemed worthy of being rescued from oblivion; and I venture to publish them as a small addition to our, at present, scanty and inadequate knowledge on this subject, and in the hope that some one else, in possession of the necessary facilities, may be induced to prosecute the inquiry, and make such a sufficient and varied number of further observations in the matter as may enable us, with tolerable precision (or at any rate with greater accuracy than at present) to estimate, by means of the thermometer, the probable time that has elapsed, since death, in a body found dead.[1]

Before detailing the results of my own observations, however, it may be well to pass shortly in review those of former workers in this field of inquiry, and to state that, whilst admitting the undoubted *rise* in temperature that does, in some instances, take place after apparent death (and which occurred in one of my own cases), yet I must, for the present, eliminate such rare exceptions to the general rule, though the possibility of such an occurrence must necessarily be borne in mind.[2]

So long ago as 1846, Dr Hensly (*Phil. Med. Examiner*, March 1846, p. 151) published a series of observations on the temperature of the body after death, in old and young persons who had died from different causes. These observations tended to show that the cooling of the body after death was a slower process than was perhaps generally imagined under ordinary circumstances, and that, even after thirty hours, the dead body may retain a temperature of 2° or 3° above that of the room.

Passing over the contemporary researches on post-mortem temperature made by Dr Fowler (and published in the same Journal), in which he determined the not infrequent occurrence of "post-mortem *caloricity*," I can find no further references to the subject until I come to the paper by Drs A. S. Taylor and Wilks, in the volume of *Guy's Hospital Reports* for the year 1863, "On the Cooling of the Human Body after Death: Inferences respecting the

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[1] Of course, to deal with a *large* number of cases in the full manner in which I have dealt with those to be hereafter recorded, would involve an *immense* amount of labour and long-continued application, which may not perhaps be absolutely necessary for general purposes.

[2] Without attempting to explain this temporary rise in the temperature of the body, after the cessation of circulation and respiration, which has been noticed in some cases of cholera, etc., I think we may safely assert, at any rate, that real and complete death has *not* taken place until the body commences to cool down (just as any other warmed and inert organic mass would do) to the temperature of the surrounding atmosphere. The same remark would also, of course, apply to the usual presence of cadaveric rigidity, until the disappearance of which, *somatic* death can scarcely be said to be complete. It is needless, and would be unadvisable, to here enter into a disquisition on these matters. Suffice it to say that, for my present purposes, I use the term "death" in its ordinary acceptation, and I take it to have occurred when circulation and respiration have ceased beyond hope of recovery.

Time of Death, and Observations of Temperature made in 100 Cases." The observations of the distinguished authors of that paper, though numerous, therefore, were, however, more or less imperfect, inasmuch as they were not commenced in each case "until after the body had been removed to the dead-house, and a variable interval elapsed during which it remained in the ward"—which interval comprised the *whole night* in those cases dying late in the evening. These observations, nevertheless, are of great value under the circumstances, and show that a dead body "cools slowly and progressively, and that the trunk generally retains a well-marked warmth for ten or twelve hours after death."

The next and only other observations I can find on this subject are contained in a paper, by Mr J. F. Goodhart, in *Guy's Hospital Reports* for 1870, in which he shows that, "except in isolated instances,—and these cases of long-standing disease, with emaciation,—the temperature is not materially *lowered* at the time of death; and that whilst a rapid rise in temperature is often observed, it occurs not in such cases as those of death from hæmorrhage, accidents, collapse, etc., but rather in patients who are already so seriously ill that a difficulty with regard to these could scarcely arise." According to Mr Goodhart, therefore, we should be justified, as a general rule, when called to see a body unexpectedly found dead, in assuming that the temperature, at the time of death, was about the normal average, and in making our calculations accordingly, in endeavouring, by thermometric observation, to estimate the length of time that may have elapsed since death.

In the last edition of his larger work on Medical Jurisprudence (2d ed., vol. i. p. 47, 1873), Dr Taylor draws attention to the "fallacious results which may arise from the customary method of judging of the degree of coldness of the body by the mere and unaided sense of touch." He truly says that "the dead human skin is a good conductor of heat, and thus the surface may *appear cold* (though it be not really so) to a moderately *warm hand*; and that, moreover, "the condition of the hand itself may lead to an erroneous impression,"—"for instance, if the two hands be of different temperatures, a recently dead body may appear cold to one and warm to the other." And he very rightly, therefore, urges that, "in all observations of the temperature of the dead body, a *thermometer* should, if possible, be employed, and be applied, not only to the *exterior* surface of the body, but also to the *interior* parts."[1]

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[1] The retention of considerable heat in the *viscera* for a long period after death, and even after the *surface* of the body feels *cool*, is an occurrence that I have frequently noticed, and cannot fail to have been observed, from time to time, by all those who, like myself, have had much experience in post-mortem examinations. Sir Robert Christison relates his experience with regard to this subject in the *British Medical Journal* for 24th January 1874, though he also states that he "never had the curiosity to ascertain the *actual* temperature by means of the *thermometer*;" and in the observations of Drs Taylor and Wilks,

Whilst the use of a thermometer is clearly indicated, therefore, for the proper estimation of the *actual* temperature of a body after death, it must not be supposed that I consider the *data* thereby afforded as being sufficient alone whereon to build an opinion as to the length of time that may have elapsed since death; for, of course, the circumstances under which the body is placed—such as the medium in which it is immersed (whether air or water), the surrounding temperature, the amount and nature of the clothing or bedding, etc.—should all be carefully noted, as is generally the case, and due allowance made accordingly. The rate of cooling, it is very evident, must be *largely* regulated by the circumstances of the case, though the requisite experimental researches are yet wanting which would enable us, more or less *accurately*, to estimate the influence of each. And the most we can do at present, therefore, is to *approximately* make such due allowance for surrounding and other circumstances as common sense and present experience tell us would influence the rate of cooling of any warm and inert organic mass. All the circumstances affecting the rate of cooling of the human body—such as we are likely to meet with them in practice—and the manner in which they act, are duly set forth in every work on Medical Jurisprudence (more particularly in the larger work of Dr Taylor), and need not here be dilated upon.

With these preliminary remarks I shall now proceed to record my own experimental observations on the subject, premising that they were made, in the wards of the West Riding Lunatic Asylum at Wakefield, on the bodies of adult male patients dying there, and that the temperature of the body was, in all cases, taken by means of a special thermometer (constructed for the purpose) placed in the left axilla, and there retained during the whole period over which, in each case, the observations extended.[1]

In this respect the method of my observations differs from that adopted by Drs Taylor and Wilks (*loco cit.*), who simply placed the exposed bulb of the thermometer against the skin of the abdomen. My observations also differ from theirs (and are consequently of greater value, so far as they go), inasmuch as, in every case, they were commenced *at the time of death* (and in some cases

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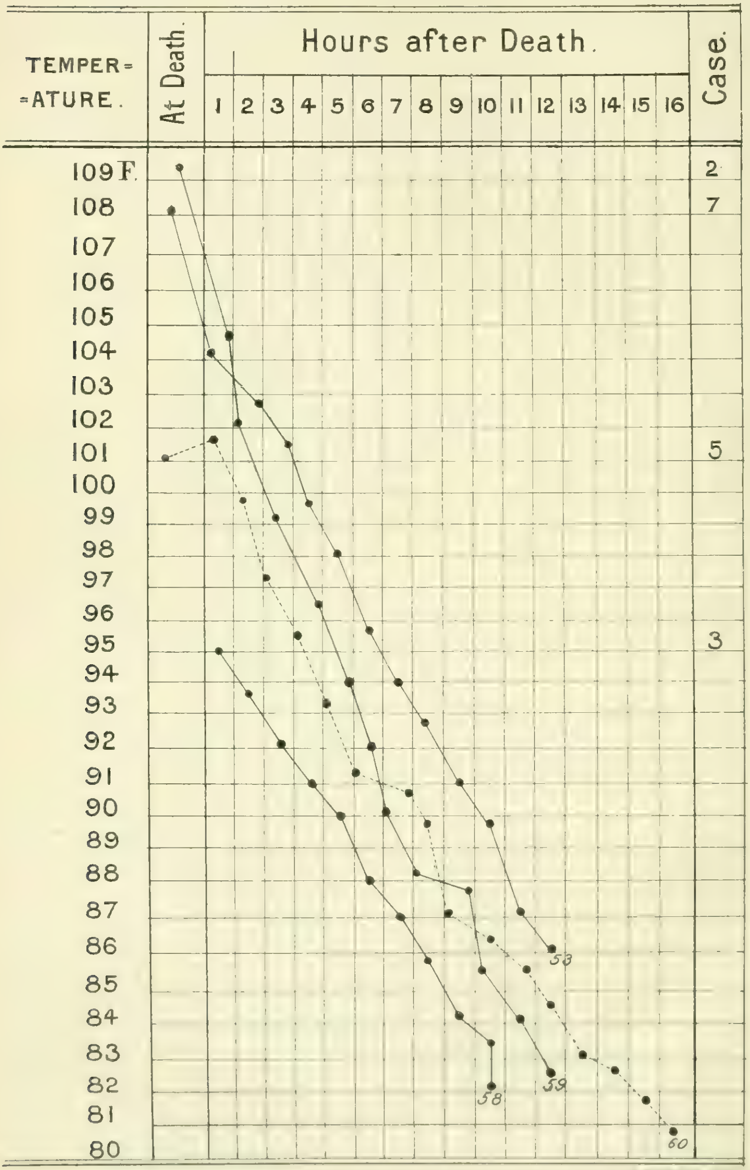
above referred to, it was remarked that in two cases, seventeen and eighteen hours respectively after death, when the temperature of the surrounding atmosphere was as low as 49° Fahr., yet the *viscera* retained a temperature of no less than 76° Fahr., the *surface* of the body feeling *cool*; whilst in another case referred to by those observers, the *surface* of the abdomen being of the temperature of 65° Fahr., the temperature of the *interior* was no less than 85° Fahr., and this ten hours after death.

[1] This is a long instrument, so bent at a right angle, that, whilst the bulb is kept in place in the axilla by means of the arm fixed to the side, the shaft lies across the chest of the *cadaver*, enabling the readings to be made without disturbing the body or removing the thermometer.

CHART ILLUSTRATING RATE OF COOLING IN FOUR CASES.



Figures, at tail end of Chart, show the Temperature of the *Room* at the time of last record of Temperature of the *Body*.

*before*), and regularly continued afterwards for longer periods of time, at intervals never exceeding *one hour*, and in one or two of the cases, at shorter intervals. With regard to the surrounding circumstances, my observations were made on each body as it laid in bed covered with the usual night-shirt and ordinary bedding—the latter being simply drawn down a little to enable the shaft of the thermometer to be seen, and the readings taken. In each case the body was in an ordinary single room (about 9 feet by 6 feet and 12 feet high), and the temperature of the room was observed and noted, from time to time, as recorded in the tables. I, unfortunately, neglected to make any observations as to the temperature of the *internal* parts of the body—an oversight (of Dr Taylor's advice) which I regret, and which should be guarded against in any future observations on this subject.

The accompanying chart shows, at a glance, the results of my observations in four of the cases in which they could be conveniently pourtrayed in such a manner, and it may perhaps be appreciated by those who may not have time to read through the following figures and details :—

### CASE I.—A. W. (Death occurring after a long series of epileptic fits in rapid succession.)

| Hour. | Temp. of Room. | Temp. of Body. |
|---|---|---|
| 6 P.M. (moribund) | 54° Fahr. | $102\frac{1}{5}$° Fahr. |
| 7.10 ,, (just dead) | 54 ,, | $101\frac{4}{5}$ ,, |
| 8 ,, | | $101\frac{2}{5}$ ,, |
| 9 ,, | 55 ,, | $100\frac{2}{5}$ ,, |
| 10 ,, | | $98\frac{2}{5}$ ,, |
| 11 ,, | 55 ,, | $96\frac{2}{5}$ ,, |
| 12 midnight | | $94\frac{2}{5}$ ,, |
| 1 A.M. | 54 ,, | 92 ,, |
| 2 ,, | | $89\frac{4}{5}$ ,, |
| 3 ,, | 53 ,, | $87\frac{2}{5}$ ,, |
| 4 ,, | | $85\frac{3}{5}$ ,, |
| 5 ,, | 53 ,, | 84 ,, |
| 6 ,, | | $82\frac{2}{5}$ ,, |
| 7 ,, | 52 ,, | $82\frac{2}{5}$ ,, |
| 8 ,, | | $82\frac{1}{5}$ ,, |
| 9 ,, | 52 ,, | $80\frac{2}{5}$ ,, |
| 10 ,, | | $79\frac{3}{5}$ ,, |
| 11 ,, | 52 ,, | $78\frac{4}{5}$ ,, |
| 12 noon | | 78 ,, |
| 1 P.M. | 54 ,, | $77\frac{3}{5}$ ,, |
| 2 ,, | | 77 ,, |
| 3 ,, | 54 ,, | $76\frac{2}{5}$ ,, |
| 4 ,, | | $75\frac{2}{5}$ ,, |
| 5 ,, | 54 ,, | 75 ,, |
| 6 , | | $74\frac{3}{5}$ , |
| 7 ,, | 54 ,, | 74 ,, |
| 8 ,, | 54 ,, | $73\frac{2}{5}$ ,, |

## CASE II.—M. G.

| Hour. | Temp. of Room. | Temp. of Body. |
|---|---|---|
| 11 P.M. (just dead) | 70° Fahr. | 109$\frac{2}{5}$° Fahr. |
| 12 midnight | | 104$\frac{3}{5}$ " |
| 1 A.M. | | 102$\frac{2}{5}$ " |
| 2 " | 62 " | 99 " |
| 3 " | | 96$\frac{2}{5}$ " |
| 4 " | | 94 " |
| 5 " | 61 " | 92 " |
| 6 " | | 90 " |
| 7 " | 61 " | 88$\frac{2}{5}$ " |
| 8 " | | 87$\frac{3}{5}$ " |
| 9 " | 58 " | 85$\frac{2}{5}$ " |
| 10 " | | 84 " |
| 11 " | 59 " | 82$\frac{3}{5}$ " |

## CASE III.—J. H. (Died at 10.50 P.M. Asthma, weak heart, and cyanosis.)

| Hour. | Temp. of Room. | Temp. of Body. |
|---|---|---|
| 12 midnight | 59° Fahr. | 95° Fahr. |
| 1 A.M. | | 93$\frac{4}{5}$ " |
| 2 " | 58 " | 92$\frac{1}{5}$ " |
| 3 " | | 91 " |
| 4 " | 57 " | 90 " |
| 5 " | | 88 " |
| 6 " | 57 " | 87 " |
| 7 " | | 85$\frac{3}{5}$ " |
| 8 " | 57 " | 84$\frac{1}{5}$ " |
| 9 " | | 83$\frac{2}{5}$ " |
| 10 " | 58 " | 82 " |

## CASE IV.—J. M. (General paralysis.)

| Hour. | Temp. of Room. | Temp. of Body. |
|---|---|---|
| 11.5 P.M. (moribund) | 70° Fahr. | 104$\frac{4}{5}$° Fahr. |
| 11.7 " (just dead) | | 105$\frac{2}{5}$ " |
| 11.17 " | | 105$\frac{2}{5}$ " |
| 11.30 " | 66 " | 104$\frac{4}{5}$ " |
| 12 midnight | | 104$\frac{2}{5}$ " |
| 12.10 P.M. | | 104$\frac{1}{5}$ " |
| 12.15 " | | 104 " |
| 12.25 " | | 103$\frac{4}{5}$ " |
| 12.35 " | 64 " | 103$\frac{3}{5}$ " |
| 12.50 " | | 102$\frac{4}{5}$ " |
| 1.5 A.M. | | 102$\frac{2}{5}$ " |
| 1.20 " | | 101$\frac{4}{5}$ " |
| 1.35 " | | 101$\frac{2}{5}$ " |
| 1.50 " | | 100$\frac{4}{5}$ " |
| 2.10 " | 60 " | 100$\frac{2}{5}$ " |

Case V.—W. S. (Patient dying after being in the epileptic "status" for thirty-two hours.)

| Hour. | Temp. of Room. | Temp. of Body. |
|---|---|---|
| 1.15 P.M. (just dead) | 56° Fahr. | 101° Fahr. |
| 2.15 " | | $101\frac{2}{5}$ " |
| 3 " | | $99\frac{3}{5}$ " |
| 4 " | | $97\frac{2}{5}$ " |
| 5 " | | $95\frac{1}{5}$ " |
| 6 " | | $93\frac{2}{5}$ " |
| 7 " | | $91\frac{3}{5}$ " |
| 8 " | | $90\frac{1}{5}$ " |
| 9 " | | $88\frac{3}{5}$ " |
| 10 " | | $87\frac{2}{5}$ " |
| 11 " | | $86\frac{3}{5}$ " |
| 12 midnight | | $85\frac{1}{5}$ " |
| 1 A.M. | | $84\frac{2}{5}$ " |
| 2 " | | $83\frac{2}{5}$ " |
| 3 " | | $82\frac{3}{5}$ " |
| 4 " | | $81\frac{4}{5}$ " |
| 5 " | 60 " | $80\frac{4}{5}$ " |

Case VI.—J. S. (Death from melancholia "attonita," with refusal of food, and artificial feeding, for several weeks previously. Died at 6 P.M.)

| Hour. | Temp. of Room. | Temp. of Body. |
|---|---|---|
| 6.10 P.M. | 56° Fahr. | $100\frac{4}{5}$° Fahr. |
| 6.25 " | | $100\frac{4}{5}$ " |
| 7.50 " | | $98\frac{2}{5}$ " |
| 8.50 " | | $96\frac{3}{5}$ " |
| 10.10 " | | $93\frac{4}{5}$ " |
| 11 " | | $92\frac{2}{5}$ " |
| 12 midnight | | $90\frac{4}{5}$ " |
| 1 A.M. | | $89\frac{1}{5}$ " |
| 2 " | | $87\frac{4}{5}$ " |
| 3 " | | $86\frac{4}{5}$ " |
| 4 " | | $85\frac{1}{5}$ " |
| 5 " | | 84 " |
| 6 " | 56 " | 83 " |

Case VII.—R. E. (Death from acute general bronchitis in a chronic maniac.)

| Hour. | Temp. of Room. | Temp. of Body. |
|---|---|---|
| 11 P.M. (moribund) | 60° Fahr. | $108\frac{4}{5}$° Fahr. |
| 12 midnight (just dead) | | $108\frac{1}{5}$ " |
| 1 A.M. | | $104\frac{1}{5}$ " |
| 2 " | | $102\frac{4}{5}$ " |
| 3 " | | $101\frac{1}{5}$ " |
| 4 " | 58 " | $99\frac{3}{5}$ " |
| 5 " | | 98 " |
| 6 " | | $95\frac{3}{5}$ " |
| 7 " | | 94 " |
| 8 " | | $92\frac{3}{5}$ " |
| 9 " | | 91 " |
| 10 " | | $89\frac{3}{5}$ " |
| 11 " | | 87 " |
| 12 noon | 63 " | 86 " |

In addition to the observations made in the foregoing seven cases, in which the temperature was noted at the actual time of death, and for some time afterwards at frequent and more or less regular intervals, observations of a more incomplete nature were made in the cases of two other bodies under somewhat different surrounding circumstances—the effect of which, in producing a more rapid rate of cooling, should be duly observed. These were as follows:—

CASE VIII.—J. W. F. (Death from melancholia and diarrhœa. Died at 7.30 A.M., and was "laid out" at once, and kept afterwards on the bed in his single room (at the temperature of 60° Fahr.) with his shirt on, and a single sheet only thrown over him.)

| Hour. | Temp. of Body. |
|---|---|
| 10.15 A.M. (about 3 hours after death) | 89⅖° Fahr. |
| 11.15 „ | 86 „ |
| 12.15 P.M. | 84⅕ „ |
| 1.15 „ | 81⅕ „ |
| 2.15 „ | 80 „ |

CASE IX.—S. W., an epileptic *found dead* (having been last seen alive about an hour previously) about 5 A.M., within the high fender before the fire-place in his single room; he had his nightshirt on, and had evidently fallen over the fender in a fit, when up for the purpose of using the night-stool. The occurrence was immediately reported to me, when on going directly to him I found the temperature of the axilla (after the application of the thermometer lasting ten minutes) to be 94° Fahr.

Proceeding now to analyse the above results, it is to be observed, on eliminating the last two cases, that the *mean average* rate of cooling in the seven others (all under fairly similar conditions as to external circumstances) was 1⅗ of a degree Fahr. per hour—the minimum rate being 1⅕° Fahr., and the maximum 2⅕° Fahr., as is shown in detail in the following table:—

| Case. | Hours under Observation. | Temperature at Time of Death. | Temperature at Time of Cessation of Observations. | Degrees. Cooled. | Average Rate of Cooling per Hour. |
|---|---|---|---|---|---|
| | | ° Fahr | ° Fahr. | ° Fahr. | ° Fahr. |
| 1 | 25 | 101⅘ | 73⅖ | 28⅖ | 1⅕ |
| 2 | 12 | 109⅖ | 82⅗ | 26⅘ | 2⅕ |
| 3 | 11 | 98⅖* | 82 | 16⅖ | 1⅗ |
| 4 | 3 | 105⅖ | 100⅖ | 5 | 1⅗ |
| 5 | 16 | 101 | 80⅘ | 20⅕ | 1⅖ |
| 6 | 12 | 100⅘ | 83 | 17⅘ | 1⅖ |
| 7 | 12 | 108⅕ | 86 | 22⅕ | 1⅘ |
| Averages and Mean. | 13 | 103⅗ | 84 | 19⅗ | 1⅗ |

* Presumedly.

It is, moreover, to be observed that, in cases 2 and 7, in which the temperature at the time of death was *unusually high*, there was a considerably greater amount of cooling during the *first hour* after death than in the other five cases—the average rate of cooling during that time in those two cases being 4⅖° Fahr., whereas in the other cases (in which there was no *rise* in temperature during that time) it was 1⅗° Fahr., *i.e.*, the actual mean average rate of cooling per hour. Such cases as these, however, in which there is an unusually high temperature at death, may be eliminated from a medico-legal point of view, as they might reasonably be expected to have been under previous medical observation and treatment, and not likely, therefore, to be *unexpectedly found dead.*

Assuming it to be correct, then, that as a rule (according to Goodhart, *loco cit.*) we should be pretty correct in estimating the temperature at the time of death in a body found dead to have been of the normal average of 98⅖° Fahr., the conclusion I would draw from my observations, as above recorded (so far as can fairly be generalized on such an admittedly small basis), is that, given a body found dead in bed in a room (with a temperature ranging from 50 to 70° Fahr.) with ordinary bedding, we may fairly estimate the time of death by taking the temperature of the axilla—the difference between which and the average normal temperature of 98⅖° Fahr. (or 98·4) divided by 1⅗° (or 1·6) would, with tolerable accuracy, give us the number of hours that had probably elapsed since death. Or, in another way, we might arrive at a solution of the problem, by finding the multiplier of 1⅗° (or 1·6), which would give the total number of degrees cooled, which multiplier would represent the number of hours that had probably elapsed since death. Thus, for instance, supposing a body to be found dead under the circumstances above described, and the temperature of the axilla being ascertained to be 80° Fahr., then 98·4 (estimated temperature at death) − 80 = 18·4 (degrees cooled), which, divided by 1·6, would give us 11·5 as representing the number of hours that had most probably elapsed since death; the correctness of the calculation being proved by finding that 1·6 × 11·5 = 18·4 (the number of degrees cooled). For all ordinary purposes, however, I think we might arrive at a sufficiently accurate conclusion by eliminating fifths and decimals, and calculating on the basis of 98° Fahr. as the average normal temperature, and of 1½° Fahr. as the average rate of cooling per hour.

The following table shows the difference in temperature between the body and the air of the room at the time of the cessation of the observations in each case, and is of interest as showing that, even so long as twenty-five hours after death (under the ordinary circumstances above described) the temperature of the body may still remain as high as 19⅖° Fahr. above that of the surrounding atmosphere:—

| Case. | Hours after Death. | Temperature of Body. | Temperature of Room. | Excess of Temperature of Body over that of Room. |
|---|---|---|---|---|
| | | ° Fahr. | ° Fahr. | ° Fahr. |
| 1 | 25 | 73⅖ | 54 | 19⅖ |
| 2 | 12 | 82⅗ | 59 | 23⅗ |
| 3 | 11 | 82 | 58 | 24 |
| 4 | 3 | 100⅖ | 60 | 40⅖ |
| 5 | 16 | 80⅘ | 60 | 20⅘ |
| 6 | 12 | 83 | 56 | 27 |
| 7 | 12 | 86 | 63 | 23 |
| 8 | 7 | 80 | 60 | 20 |
| Averages | 12 | 86 | 60 | 26 |

A further consideration of the details of the cases, as above recorded, tends to show that the body cools somewhat *more rapidly* for the *first few hours* after death than it does later on; and especially so, as before observed, would this seem to be the case when the temperature is extraordinarily *high* at the time of death. This is shown by the fact that, during the *first three* hours after death, the average rate of cooling per hour (in the seven cases in which the observations were complete) was 2° Fahr., and in the cases two and seven alone, no less than 4° Fahr. This is an interesting fact which, I think, should be borne in mind, be the explanation what it may; and bearing it in mind, we might fairly judge, with regard to Case IX., *found dead* at a temperature of 94° Fahr. (and at the same time allowing for the exceptional circumstances under which the body was found), that he had only been dead about one hour; and such was really the case. In Case VIII. also, had it not already been known to be the fact that he died at 7.30 A.M., the temperature of 89⅖° Fahr., as found to exist at the time of the first observation, viz., three hours after death, is just the temperature which, according to the result of my observations (and with all due allowance for the exceptional external circumstances which existed in this case also), we should have expected it to be, and from which the time that had elapsed since death could have been fairly calculated had it not already been known.

I ought not to conclude this paper without just drawing attention to the fact that, in one of my cases (Case V.), there was a slight *post-mortem increase* of temperature (amounting to ⅖ of a degree) of an evanescent nature—the temperature being at the time of death 101° Fahr., one hour afterwards 101⅖° Fahr., and two hours after 99⅖° Fahr. This temporary and evanescent rise in the temperature after so-called death (*i.e.*, cessation of circulation and respiration) is, of course, a well-known phenomenon which has been observed in rare cases to have occurred to a very much greater extent than above recorded, both as to degree and duration. I have already referred to this subject in the earlier part of the paper, and need not now further dwell upon it, except to remark that it is of itself a subject of considerable medico-legal interest and importance (as shown in the case of the "West Haddon Tragedy" referred to in the *British Medical Journal* for 17th, 24th, and 31st January 1874), and this remarkable phenomenon may well form the subject of further and independent inquiry and experimental research.

## ARTICLE VI.—*On a Labour Obstructed from an Unusual Cause.* By WILLIAM L. REID, M.D., Fellow of the Faculty of Physicians and Surgeons, Physician-Accoucheur to the Western Infirmary, Glasgow.

(*Read before the Edinburgh Obstetrical Society*, 14*th January* 1880.)

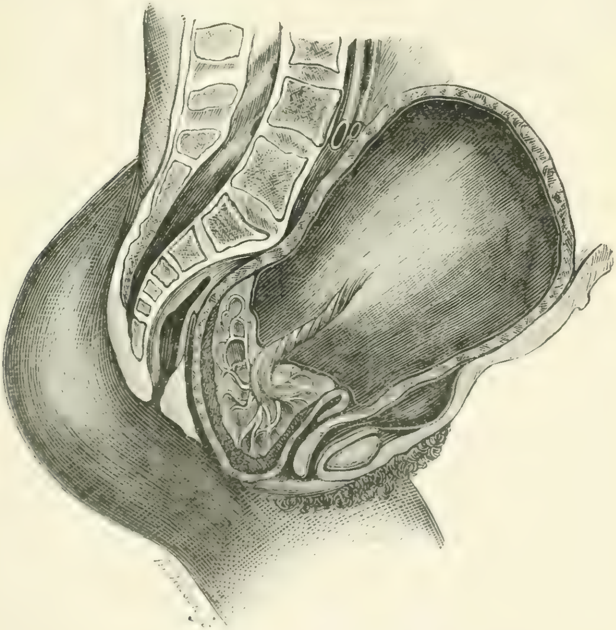
MR PRESIDENT AND GENTLEMEN,—I beg to submit the details of the following case for your consideration, not because there is anything very wonderful or striking in its nature, but because the diagnosis was so obscure as to puzzle four, perhaps not very acute, medical practitioners, of whom I was one.

To avoid the possibility of hurting any one's feelings in connexion with the matter, I trust you will allow me to mention these brethren simply as Dr A., Dr B., and Dr C., and the patient as Mrs D.

Perhaps I ought to apologize for the form in which I intend to put the case. It will not be as it presents itself to my mind now, but as it did during its various stages. In this way I hope your interest in it will be better sustained; and it has always seemed to me that if the experience of older men were more frequently given in this fashion, we younger men, who, of course, cannot always be actual onlookers, would benefit much more thereby.

At 10 P.M. on Saturday, the 22d November last, I was asked to see Mrs D. on account of supposed obstruction to the progress of her labour. On my arrival I found that the patient was a spare woman of forty years of age, who had been married for nineteen years, and confined of five children naturally, the youngest born two and a half years before. The history of her case, as I got it at the time, was as follows:—Five months, as she thought, after becoming pregnant, she suddenly took what she called an attack of inflammation, and imagined she was going to have a miscarriage. She had pain in the region of the true pelvis, and could not pass her water except when standing straight up. When she sat down none would pass. After a few days of great pain, during which she was confined to bed, a tumour which had appeared at the vulva early in the attack suddenly burst and discharged about a pint of yellow matter. This gave her great relief, but from that time till labour came on she had to wear a T bandage in order to keep up a tumour which appeared outside the vulva whenever she had been a little while on her feet, and which gave her a painful feeling of bearing-down. This she did by the advice of Dr A., who attended her during the attack. On the morning of Friday, the 21st November, she took labour pains, which continued at short intervals during the day, the pains not being severe. She walked up and down the room all the succeeding night, the pains becoming gradually stronger. On the Saturday morning Dr A. was sent for. He examined her repeatedly, said he thought she would be a long time ill, and advised that a medical man in the immediate neighbourhood should be asked to take charge of her. This was done, and Dr B. came and waited with her for some time; but as he had an important engagement in the afternoon, he suggested that Dr C. should be called. When the latter arrived the patient was handed over to him with full powers. After lengthened and frequently repeated examinations he failed to detect any os uteri. I ought perhaps to mention that Dr C. is an intelligent and careful practitioner. Thinking that the woman was getting into a dangerous condition, he advised the husband to ask me in consultation, which was done. I found her to all appearance very ill. Her pulse was 130, and her skin hot and dry. There were dark circles round her eyes, and she tossed about the bed in a restless, half-delirious manner. Her abdomen looked like that of a woman near her full time, with a tumour in the hypogastric region which seemed to be the distended bladder. There was another tumour in the left ilio-lumbar region, which I took to be the child's head. A very thorough examination by palpation was not made, owing to the presence of considerable abdominal tenderness. Careful auscultation failed to detect the fœtal heart. She had been passing a little urine every now and then during the course of the day. The pains came on once in every quarter of an hour, and were feeble.

On vaginal examination I found a tumour about the size of a child's head filling that canal and projecting from between the vulva when the uterus contracted. It was moderately firm in consistence, and somewhat elastic on pressure. I examined its surface carefully without meeting anything but smooth mucous membrane. The vaginal mucus was scanty and offensive in character. I explored the whole vagina, before and behind the tumour as well as over its surface, and was met at every point by plain tissue: not even a scar could be detected. As this proceeding had been repeated very frequently, if not also vigorously, during the day, the vagina had become very tender, and we determined to put the woman under the influence of chloroform. Before doing so a gum elastic catheter was passed, and about 12 oz. of urine withdrawn, when the small tumour in the hypogastric region was found to have disappeared. After she became unconscious another examination was made without any greater success. I sat down to consider what was to be done in the circumstances. It struck me that as the woman seemed to be sinking rapidly, and that delivery by some means or other was urgently called for, the most prudent plan would be to open cautiously through the thinnest part of the tumour as far forward as to be pretty sure of avoiding the peritoneum. If it turned out to be the uterine wall, I judged that we must open near the os; if a tumour not uterine, and containing fluid, it would still be good practice. While this was passing through my mind it occurred to me to try exploration with my left instead of my right hand, and just as it was being withdrawn after a lengthened examination, with the finger directed toward the pubis, I felt a slight irregularity behind the pubic bone. Into this, with the use of a little force, I pressed my forefinger, and felt that it was within the cavity of the uterus. The right forefinger having been introduced instead of the left, I pushed it upwards and backwards, when I felt what turned out to be an elbow, and then the finger was arrested by the promontory of the sacrum. I was now certain that the tumour in the vagina was part of the uterus, and that it was probably filled with a large clot of blood from accidental hæmorrhage, which had not made its way as far as the vagina. I pulled down the os uteri and gradually dilated it, introducing one finger after another till my whole hand passed. The membranes were then ruptured, and I felt that the cord ran down into the vaginal part of the uterus, and on pushing the tumour up from below it turned out to be the placenta. To



sum up the rest in few words, I may just say that a leg was seized and brought down, and the breech and other leg were used to slowly dilate the os; and after bringing down both arms and pushing the vaginal tumour well up, the head passed without any special difficulty.

We had some trouble with the child before it breathed, it being weak and badly nourished. It only lived for five or six hours. The placenta was removed by expression after a drachm of ergot had been given. There was little more than the usual amount of discharge, and the patient made a good although somewhat tedious recovery.

The following particulars of the history of the case were subsequently obtained:—After she weaned her last child menstruation was a little irregular and less frequent than usual, till she again became pregnant. She continued in ordinary health till the occurrence of the inflammatory attack, which came on suddenly and without any obvious cause. Dr A., who attended her, told me that he thought it was a pelvic abscess pointing in the vagina from which she had suffered, and that when he saw her on the morning after her labour came on he thought the tumour in the vagina contained pus, and that as the head came down the pressure would cause the abscess to burst. He said that he could not discover any trace of the os uteri. On inquiry I found that from this attack onwards a tumour presented itself constantly at the vulva, and had to be kept in by the T bandage. Dr A. had no clear idea of what this tumour was.

Dr C. told me that he had seen Dr B., who said that after careful examination he could not find the os uteri, and he did not know what to make of the case.

On the 8th of January of this year I visited and examined Mrs D. She had been out for a walk in the afternoon, and felt a little tired, but was otherwise well. She had no feeling of pain or bearing-down on walking. A vaginal examination showed that involution had gone on in an ordinary way, the uterus being perhaps a trifle heavier than one would have expected. It was freely movable in the pelvis, and there was no trace of scar or hardened tissue in the vagina or neighbourhood of the os and cervix. The organ was lower in the pelvis than usual, and in position somewhat like that of a certain stage of procidentia, viz., with the os looking too much forwards and the fundus lying too much backwards. On pressing back the cervix the fundus rose into its natural position.

Such are the details of a case which to me was both puzzling and instructive. The only theoretical remarks I will venture to make are these:—There had been no pelvic difficulty before the formation of the abscess. Ever after it, until delivery, a tumour existed so low down as to present itself at the vulva. This tumour turned out to be uterine, so that the probability is that the uterus was forced out of its natural relation to other parts in the pelvis by the accumulation of pus, and prolapse of its posterior wall took place on the sudden emptying of the abscess.

Or, if retroversion had already existed with the placenta in the posterior and lower part of the uterus, and the fœtus so placed as by its growth to carry the upper part above the brim, then the bursting of the abscess would simply aggravate that condition so far as to cause the lower uterine portion to appear externally.

As to the labour itself, I am of opinion that the os uteri did not dilate, because when a uterine contraction took place the fold which overlaid the os pressed it against the pubis, and so the amnionic fluid could not gain effectual access to it.

In this country, at least in towns, we do not often see how cases of difficult labour end when left entirely to nature. I do not know whether the one of which we have been speaking would have terminated well or ill; but so far as we could judge from the result of long-continued uterine action, it seemed probable that death rather than delivery would close the scene.

## ARTICLE VII.—*Notes of a Case of Death During the Administration of Chloroform; with Remarks as to the Possible and Probable Causes of Death.* By GEO. B. SILKE, M.B. and C.M., House Surgeon, Royal Infirmary, Edinburgh.

A. B., æt. 45, a married man, was admitted to Ward V. of the Royal Infirmary, 3rd January 1880. On the previous day, while cutting wood with an iron cleaver, he chopped off the index finger of his right hand, at a point a little to the proximal side of the first interphalangeal joint. The cut was a clean one, the bone and soft parts being divided at one level. On the Monday following his admission, Mr Chiene requested me to remove a small portion of the bone and bring the edges of the wound together.

I accordingly gave orders that the patient was to have no dinner, and decided to perform the operation at my evening visit.

Unfortunately, the patient got out in the afternoon, without my knowledge, and, as the post-mortem revealed, partook of a hearty meal of meat, etc. Whether or not he at the same time took anything to drink I cannot say; but this is quite possible, as the patient was obviously nervous, and was anxious to be assured that he would get chloroform. He would therefore be by no means unlikely to raise his courage by means of stimulants.

Chloroform was administered to the patient, who was apparently a strong, healthy man, by the ordinary method, on a towel, I myself carefully watching him. Nothing of much note occurred during the earlier stages of administration, beyond the extreme violence of the struggling, which lasted some time. Ultimately, however, muscular relaxation occurred, and I then ordered the removal of the towel, the breathing at this time being perfectly free and easy. I next proceeded to examine the finger; but while so engaged, and before I had got the dressing off, the patient again struggled, and I requested the gentleman administering to reapply the towel. This was done without the addition of any more chloroform. A few whiffs more, and he again became quiet, and the drug was once more removed. According to the statements of the chloroformist and another gentleman who was watching him, the breathing was quite natural for some seconds after this. Suddenly the respiration stopped, and the patient became livid. The tongue was immediately pulled well forward with artery forceps, and artificial respiration by Sylvester's method begun, the patient being placed transversely across the bed, with the head dependent. The windows were immediately opened round the patient, and the chest exposed and filliped with cold wet towels; later on hot and cold wet towels were applied alternately. The artificial respiration was kept up thoroughly for an hour by myself and one of the dressers, with a short interval (at about ten to fifteen minutes after the stoppage of respiration) to allow of the opening of the external jugular vein, which was remarkably turgid. This latter operation, aided by the passage of a probe downwards to push aside the valves at the root of the neck, resulted in a free flow of dark blood, which I checked by pressure when between ℥ij. and ℥iij. had escaped. No benefit followed this; and later on, when nearly an hour had elapsed, and I had removed pressure, blood only escaped with the movements of the artificial respiration. The heart, as far as I could judge, continued to beat for about ten minutes. After about an hour had elapsed, with the concurrence of two of my fellow house surgeons who had kindly come in to render me any assistance in their power, I gave up the attempt to restore animation, the heart having been inaudible for about three-quarters of an hour, and the eyes being glazed.

*Post-mortem.*—A post-mortem examination revealed the following lesions and conditions:—

1. *Lungs.*—Extensive pleuritic adhesions of the left lung. Not any extreme congestion, and the blood darker than would have been expected from the amount of artificial respiration. This latter may have been due in some small measure to an occasional difficulty which I experienced in getting air to pass into or out of the lungs, notwithstanding the tongue being well forward.

2. *Liver.*—Much enlarged and fatty. There was nothing to account for this.

3. *Heart.*—By no means excessively distended, probably owing to the relief afforded by the opening of the external jugular. The blood fluid, and with an odour of chloroform.

4. *Larynx and Trachea.*—Not congested, and no foreign body present. The aryteno-epiglottidean folds were abnormally long and lax, which may have had some bearing on the difficulty of effecting respiration alluded to above.

5. *Stomach.*—Contained a large quantity of partially digested food.

*What was the cause of death?* Here we have an apparently strong and healthy man dying, and showing nothing post-mortem which could be considered *per se* as sufficient to account for death.

Let us first take up the post-mortem appearances, and see if they can throw any light upon the subject.

1. *Lungs.*—Pleuritic adhesions of left lung. The *Union Médicale* for 1857, commenting on a case where certain ecchymosed spots were seen post-mortem in a lung with extensive adhesions, says, "In this case the left lung had been in its normal condition, but the right lung was deprived of a portion of its functions, a circumstance which would become a source of danger when the subject was submitted to the action of chloroform. It is certain that, when a lung can no longer move freely in the pleura, its movements are diminished and its circulation is more or less impeded. Chloroform, in place of becoming distributed equally and uniformly, may then become accumulated in considerable quantity in a lung which can no longer return upon itself in consequence of the adhesions which affix it to the parietes of the thorax, and lesions are produced resembling those which M. Faure determined artificially in animals —lesions which render the lung unsuited for hæmatosis, and the continuance of life impossible." The lesions referred to seem to be a sort of infarction of the lung at various points—in one case the whole lung being dense and fleshy, except slight crepitus at the edges. I am not able to say whether there was any degree of this in the present case; but what I would call attention to is the probable collection of the chloroform in the lungs, and its subsequent slow absorption. The bearing of the adhesions on the attempts at restoration I should imagine to be of little import, artificial respiration being a mechanical, and not a vital act.

2. *Liver Fatty.*—No cause of this lesion traceable. Chronic alcoholism is known, of course, to be a cause, but no satisfactory history of such a condition could be obtained here. The bearing of chronic alcoholism on the general question I will discuss further on.

3. *Aryteno-epiglottidean Folds.*—It is well known that these may become a source of danger when in a relaxed state, by occluding the glottis. In the present case they were abnormally long; and although the tongue was drawn out, the first movement or two of artificial respiration failed to produce the inspiratory sound. This might have been due to a spasm of the glottis, a point I shall discuss hereafter; but later on, at varying intervals, I was met by the same difficulty, which never lasted very long, however. Here, then, was a point which may have tended directly or indirectly to the fatal result.

4. *Stomach.*—Food present. Digestion was evidently active here, with, of course, its physiological accompaniment of increased vascularity of the organ, and probably the consequent drowsiness and inability for active exertion, or rousing of the system, to resist somnolent influences.

In the third Report on Anæsthetics to the British Medical Association (Braithwaite, vol. ii., 1879), I find that chloroform distinctly lowers the blood-pressure, sometimes unexpectedly, with great rapidity, to nearly *nil*. In such a case the diminution of the blood-pressure already present owing to the amount of blood in the stomach might be instrumental in giving the case a fatal turn. I have no reason for supposing that anything of the sort occurred here, as the case was not one of syncope, and I merely mention it as a possible, if slight, source of danger in other cases.

*Vomiting.*—The acknowledged danger in such cases did not occur here, no retching being observed, and a careful examination of the upper portion of the respiratory tract revealing no signs of foreign matter.

Passing now to the consideration of some points connected with the habits and character of the patient, we find :—

1. *Chronic Alcoholism.*—Although we have no history of this here, beyond the fatty liver, yet I should like to make a few remarks on general grounds.

I have several times of late noticed, and have had the remark made to me by others, that a patient may, when the chloroform is removed, be sensitive as regards the conjunctiva, but that after a short time has elapsed the conjunctivæ fail to respond to touch, although no more chloroform has been inhaled by the mouth or nose.

This seems to be capable of but one explanation, viz., that more chloroform must have been absorbed into the system after the removal of the cloth, and this can, of course, only come from the lungs, which will be fully charged with the vapour. Again, the more concentrated the vapour left in the lungs, the deeper will be the subsequent narcosis, a larger quantity being absorbed.

This rate of absorption varies in different patients. In children the rate is much greater than in adults, probably owing to the delicacy of the tissues of the lung, and any chloroform left in the lung is more rapidly absorbed and its effects seen. The heavy chloroform vapour gets no time to collect in the lung. For the same reason the exhalation is more rapid in children, and is aided by the greater rapidity of the circulation ; hence the safety which usually attends the administration of chloroform in young subjects.

Now, among the affections to which the chronic dram-drinker is liable must be mentioned fibroid phthisis. Here we have a gradually increasing thickening of the fibrous tissue throughout the lung, naturally interfering with the free interchange between the blood and the air in the pulmonary air vesicles. May we not in this find a partial explanation of the well-known difficulty of getting the chronic alcoholist under the influence of chloroform? and shall we not have a gradually increasing percentage of the heavy chloroform vapour lingering in the lung with each respiration? Admitting this, we have here an obvious source of danger in the absorption of chloroform continuing for some time after the patient has been considered to be not more than sufficiently under. It is, I think, not necessary that the indurating process should be sufficiently advanced to make it immediately noticeable post-mortem, in order that the danger alluded to should occur.

2. *Recent Alcoholism.*—As already pointed out, we have no proof of this in the present case. Alcohol is, if given in sufficient doses, an anæsthetic, as is well known to those who have had to sew up a drunken patient's head. The only response to the passage of the needle through the skin, usually productive of such marked pain, is a slight wincing. There is a general tendency to somnolency, which cannot fail to cause a deeper anæsthesia when chloroform is administered.

Nelaton, speaking before the Paris Commission on Chloroform, objects to the exhibition of this drug in drunkenness. He states, as the result of experiments, that animals in a state of drunkenness are more rapidly anæsthetized, and that the danger to life is greater. Anæsthesia was delayed here, which is against any theory of recent alcoholism.

3. *Struggling.*—This was very marked here, as it was also in another case I saw recently, where respiration stopped and difficulty was experienced in restoring the patient. Dr Carr says that where there is much struggling much chloroform is required. On this symptom I have little to suggest beyond the possibility that in some cases, by aiding the return of venous blood to the heart, it might tend to increase the congestion of the right side, and thereby hasten its cessation.

Dr Kidd says the stage of violent plunging is most dangerous, but does not volunteer an explanation why.

4. *Fear.*—Snow says that fear has no effect one way or the other. Dr Pretty, however, quotes several cases in which fright seems to have had an undoubted influence on the fatal result; he also mentions the case of a man who took chloroform without any previous feeling of fear, whose general sensations while under its influence were pleasant: on a second occasion, however, its administration was preceded by a feeling of nervousness, and he experienced a sense of distressing dilirium while under. Dr Pretty omits to mention, however, in most of his cases, whether it was fear of the chloroform or of the operation which the patient felt. In the present instance there was distinct nervousness, and this from a fear of the operation, not of the chloroform.

Another important point to which allusion should be made is—

*Spasm of the Glottis.*—In a report of a case of death from chloroform (*Medical Times and Gazette*, vol. ii., 1856) by Dr Lee, he noted his inability to produce artificial respiration (by the mouth-to-mouth method, I presume), and concluded that this was due to spasm of the glottis. This theory of spasm is also alluded to by M. Robert before the Paris Commission of 1857; he says spasm of the glottis or pharynx may occur.

Dr Marcet, writing in 1861 (*Med. Times and Gazette*), goes more fully into the question, and considers that spasm of the glottis is a frequent cause of death. He considers this to be due to its indirect action through the blood, and not to its directly stimulant action on the glottis. In support of this theory he says, "It may be inferred that spasm of the glottis takes place occasionally under the influence of chloroform.—1. Because several substances possessing anæsthetic properties are positively known, when present in the blood, to have given rise to closure of the glottis. 2. Because the symptoms of death from chloroform are consistent, more or less, with death from sudden asphyxia. 3. Because the post-mortem appearances after death from chloroform may be accounted for by assuming that death has taken place from asphyxia." He then quotes three cases of closure of the glottis which were diagnosed as spasmodic, viz., one each from alcohol, sulphuretted hydrogen, and carbonic acid poisoning, in all of which relief was gained by opening the trachea.

In the alcohol case the patient was breathing with difficulty, veins of the face and neck turgid, and death evidently impending. The symptoms began to mend immediately tracheotomy was performed. As regards the value of this case, he remarks, "Like alcohol, chloroform acts first on the brain, then on the spinal system, and finally on the sympathetic;" and again, "If alcoholic poisoning is positively shown to have threatened life from asphyxia owing to spasm of the glottis, I see no reason why death from chloroform should not be due occasionally to the same phenomenon." He ends by strongly advising tracheotomy, recommending its immediate performance when there is stoppage of the respiration. The mere passage of the finger down to the glottis would be sufficient in many cases, as it was in one case I heard of lately.

In the present instance, I think it quite possible we may have had this complication to deal with. It may be that the chloroformist was deceived in thinking that the breathing was all right, and that the second struggling may have been for breath—commencing asphyxia. Be this as it may, the difficulty of starting artificial respiration was indubitable, though not persistent.

General conditions as to age, sex, operation, etc.—

1. *Age and Health.*—Crisp says, speaking of a number of fatal cases, "Nearly all were young and healthy, and free from organic disease." The patients were in the prime of life as regards age and health.

2. *Sex.*—Out of 133 cases collected by Dr Kidd, 90 were males and 43 females. The probable explanation of this would be the greater frequency of operations in the male; and if the alcoholic theory is to be maintained, the greater prevalence of drinking habits among men would count.

3. *Operation.*—Dr Kidd also calls attention to the fact that the administration of chloroform for the minor operations seems to have

been attended with more danger than for the major. Again, in 9 minor amputations, death occurred before the operation was commenced in 6.

Out of 121 deaths under chloroform, we have the period at which death occurred as follows:—

| | | |
|---|---|---|
| 1. | For intended operations, or immediately before operations, | 54 |
| 2. | During operations, . . . . . . . . | 42 |
| 3. | After—immediately or soon, . . . . . . | 25 |
| | | 121 |

Is there any way in which these peculiarities can be explained? To some extent I think there is. One of the indications, when a patient stops breathing, is to apply cold to the chest, filliping it at the same time with a wet towel—in other words, to call into play the well-known reflex action of the peripheral sensory nerves on the respiratory centres. For the same reason ammonia is applied to the nostrils. Is it not possible, then, that the incision made by the surgeon acts as a partial restorative, a stimulus to the peripheral nerves, and that in some of the major operations this stimulus constantly recurring prevents the patient ever becoming too deeply under. The probability of this is still further shown by the fact, that a patient who seems scarcely to have been under fully during a severe operation often remains in a state of complete narcosis for some time after the surgeon has finished with him; he is said to be asleep: in other words, the stimulus is removed, and the drug is free to exercise its full powers. I think it is to this we may attribute a majority of the 25 cases spoken of above under the head of "immediately or soon after."

This seems to indicate to us a remedy, which I had an opportunity of making a practical trial of some few nights since in the allied condition of alcohol narcosis. A patient was brought into the Royal Infirmary on a stretcher, the only history being that he was picked up in the High Street. He was breathing stertorously, and his pupils were contracted somewhat unequally. There was a little blood about the face, but careful examination showed no cut or injury to the scalp; examination of the rest of the body revealed no injury to trunk or limb. I smelt the breath, which was decidedly alcoholic. I attempted now to rouse him by putting my mouth to his ear and yelling into it, but without success. This stimulus being evidently insufficient, I brought my open hand smartly across his buttock, and he responded by an uneasy movement. I accordingly repeated the stimulus several times, each blow being followed by increasing animation, until he finally sat up, and looked about him and began to talk. Here, then, was a case of acute alcoholic narcosis cured by the exhibition of a smart but harmless stimulant. Why should not a like result follow similar treatment in the earlier stages of chloroform narcosis?

Finally, can we blame the method of administration? The Edinburgh School has so definitely decided in favour of the towel or cloth system, as opposed to any more complicated apparatus, that it is hardly necessary to remark on this. I would merely call attention to Lister's reply to the objection raised against the cloth, of giving off the vapour insufficiently diluted. He says, "I find that, so far from the amount of chloroform being in dangerous proportion to the air inhaled, the *whole* quantity which evaporates from the under surface, even when the rate is most rapid,—viz., just after the liquid has been poured upon it,—is below Dr Snow's limit of perfect security against primary failure of the heart."

To summarize briefly, I think we may conclude that the following were unfavourable conditions in this case, even if they cannot be directly credited with the fatal result, viz.,—1. Spasm of the glottis; 2. Long aryteno-epiglottidean folds; and, to a lesser degree, the pleuritic adhesions and the nervousness of the patient.

# Part Second.

## REVIEWS.

*Lectures on Diseases of the Nervous System.* By SAMUEL WILKS, M.D., F.R.S. London, 1878: J. & A. Churchill. Pp. 472.

IT might be supposed, in these days of rapid advance in the contiguous domains of nervous physiology and nervous pathology, that an author who began to write on those subjects in those early times "whilst controversies were still warm as to the interpretation of a double brain," and who seems never to have done anything in the way of experimental physiology, could have nothing to say that would be likely either to interest or instruct us. But experimental physiology is not the only guide to truth, fortunately; for, so far as the nervous system is concerned, it has proved a veritable Will-o'-the-wisp to many of its most ardent followers, and has led some of them into uncertainties as bewildering to the physician as the quagmires of spunkie to the wandering traveller. Works like the present, containing the experience of a lifetime enlightened and corrected by sound pathological knowledge, are of priceless value, even though devoid of that pretentious precision born of the scalpel. They give us pictures of diseases as they occur in real life, and not mere histories of artificial lesions, and they show how a sound and honest physician should endeavour to relieve, if he cannot altogether remove, the sufferings of his patients, without degrading his art to a mystery or himself to a showman. Since the days of Graves, *facile princeps* of clinical authors, there has been no pleasanter writing on medical subjects than is to be found in these lectures. They by no means exhaust the subject of nervous disease, but they leave little to be desired in regard to those affections of which they treat; and the latest surmises of Ferrier, the most recent observations of Hughlings Jackson and Clifford Allbut, are skilfully coupled with the clinical records of Abercrombie and Bright, and used to supplement, to illustrate, and to explain the clinical experience of the author himself. There are few works upon the subject of nervous disease which we can recommend with greater confidence to the student, not only for the fulness of the strictly professional knowledge it contains, but also for the large amount of general information bearing on special diseases to be found in it, which interests the reader, impresses the subject on his memory, and frequently opens up analogies leading to clearer conceptions of the subjects treated of. Our only regret is that it has not been noticed earlier in our pages; but "It is never too late to do well," and "Better late than never," are two excellent proverbs, not, perhaps, applicable to our previous carelessness, though feebly expressive of our present feelings.

*Cyclopædia of the Practice of Medicine.* Edited by Dr VON ZIEMSSEN. Vol. VIII. *Diseases of the Chylopoietic System, with Chapters relating to Diseases of the Bladder and Urethra, and Functional Affections of the Male Genital Organs.* Vol. XIII. *Diseases of the Spinal Cord and Medulla Oblongata.* London, 1878: Sampson, Low, Marston, Searle, & Rivington.

THE eighth volume of this important Cyclopædia continues to present to its readers the same advantages and disadvantages which have been so eminently displayed in the preceding volumes. It is thoroughly German in its character, careful and minute in experimental or pathological illustration, and intensely ignorant as to treatment, as well as to all medical history, in spite of an elaborate display of references, chiefly to German works or to those few English ones which from some accident or other have been translated into German. And this matter is not mended by the translation having been mainly done by young men, whose only qualification seems to have been an imperfect knowledge of both languages and an almost entire ignorance of medicine, and especially of medical literature, which has enabled them to swallow all that the original writers have provided them with, and to give forth with confidence statements which ought never to have been allowed to pass uncontroverted. We specially refer at this time to the article on Leucæmia by Mosler, translated by Dr Eden of Boston, in which it is said, "There can be no dispute at the present day that the discovery of leucæmia belongs to Virchow alone." And further on it is said, "It has already been properly shown that with the *new name* leucocythæmia, which he (Bennett) bestowed upon the disease, he gained no claim to the priority of the discovery"—the truth lying quite the other way, as we have already frequently had occasion to point out in these pages. It was unquestionably Bennett who first discovered the connexion of what he, following the old nomenclature, called a suppuration of the blood "independent of inflammation," with enlargement of the spleen. Of this there is no doubt. Previous observers had made no difference between pus corpuscles and the pale globules of the blood; and more recent researches have gone far to show that there actually is none, and that, as Virchow himself has said, we require to know the source of a white corpuscle to enable us to say whether it is a pus or a blood cell. It is to Virchow, and not to Bennett, that we owe the attempt to base priority upon the adoption of a *new name, leucæmia*, a name which Bennett very properly corrected to leucocythæmia, because the blood itself is not white—there is only an excess of pale cells in it. But Bennett never claimed priority because of this change of name, but simply, as any one else would have done, because of priority of observation. In his work, which is still a standard one on the subject, he gave Virchow all the credit for the recognition of the state of the blood as a secondary one depending upon the peculiar affection of the spleen. This much is certainly due to Virchow; but it is little in favour of his candour that he refused to acknowledge the undoubted merit of Bennett as the earliest discoverer of this disease, and the want of any reference to the old and excellent researches of Hewson is for this reason only too apt to be referred to suppression, and not merely to ignorance, to which it was not improbably due—an ignorance which, if real, is certainly unpardonable, inasmuch as the great value of the discovery consists in its illustration and confirmation of Hewson's views regarding the function of the spleen and lymphatic glands. Whatever Mosler and his translator might have said or left unsaid through animus or ignorance, it is surely not too much to expect that the editor of so important a Cyclopædia as this should not allow to pass unchallenged such glaring misstatements as those we have referred to. We know that the name of Bennett is not unknown in America. Surely his fair fame should be as dear to our cousins as to ourselves; and we at least, in justice to a former editor, and one of the most distinguished physicians of our day, cannot but protest against this reiterated and barefaced attempt to deprive him of an honour which is his by right, and to express our astonishment that the English editor of this Cyclopædia should have homologated by his silence this renewed endeavour to rob Bennett of his right.

In this volume there is an excellent and instructive paper on Dilatations of the Œsophagus, their causes, symptoms, diagnosis, and treatment, which is well worthy of careful perusal. And there is also a very valuable paper by Curschmann upon Abnormal Seminal Losses, in which the whole subject is considered in a thoroughly scientific manner, and obviously on the basis of a large experience.

In regard to the thirteenth volume, it is sufficient to say that the original was written by Erb of Heidelberg, and that the translation is fairly done. The first two hundred pages are devoted to a pretty full consideration of such general subjects as Anatomy, Physiology, Symptomatology, Etiology, Diagnosis, and Therapeutics; while the following seven hundred and odd pages are occupied with a discussion of the various diseases of the cord and medulla. It is unnecessary to add that it is worthy of the fame of the author, and that it would be difficult, if not impossible, to name any other work in the English language containing so full and accurate an account of the subjects of which it treats.

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*Lectures on Bright's Disease of the Kidneys.* Delivered at the School of Medicine of Paris. By J. M. CHARCOT. Translated, with the permission of the Author, by HENRY B. MILLARD, M.D., M.A.

IN these lectures Professor Charcot gives a concise and admirable description of the pathology and clinical history of the sub-acute and chronic forms of Bright's disease. All reference to treatment is omitted—a pity, we think, for an outline, however brief, of the chief indications for treatment would have added to the value of the book.

The author accepts the opinion so long held by Johnson, Grainger Stewart, Dickinson, and other British authorities, that the cirrhotic form is not merely a late stage of the large white kidney, but that it is a distinct affection, and considers George Johnson's argument with regard to the relative frequency of dropsy in the two conditions as proof positive of this position.

The first two lectures are devoted to the minute anatomy and physiology of the organ. The character of the epithelium in the various parts of the uriniferous tubules is carefully described, and it is pointed out—a fact which we are afraid is sometimes forgotten in the microscopical examination of supposed pathological kidneys—that in the normal condition the epithelium of the convoluted tubes and ascending loops of Henle is highly granular and cloudy, and so voluminous as almost to fill the tubes. Professor Charcot, disagreeing with the assertions of Hoppe-Seyler and Zalesky, believes that it has now been emphatically established that the specific products of the urine (urea and uric acids) pre-exist in the blood. He accepts the view of Bowman that the glomeruli serve only to separate the water, the secretion of the specific principles taking place in the special cells of the uriniferous canals. Heidenhain's experiments are quoted to show that the convoluted tubes and the ascending loops of Henle have special secreting functions. That observer injected weak solutions of sulphate of indigo, a substance which is rapidly excreted by the kidneys, into the blood of an animal. The spinal cord below the medulla was then divided, by which means the excretion of water by the kidneys was completely prevented. After a short interval the animal was killed, and the kidneys carefully examined microscopically. The convoluted tubes and the ascending loops of Henle (those portions of the tubules lined with cloudy, rod-like epithelium) were alone coloured. Bowman's capsules and the descending branches of Henle's loops did not present the slightest trace of blue.

In Lecture III. tubular infarctus of the kidney and urinary casts are described, and a summary of views of Bright's disease is given. The author believes that the clinical significance of casts has been greatly exaggerated. He points out that casts formed in the convoluted tubes with difficulty pass through the narrow descending loops of Henle. He describes the following forms of casts:—1. Hyaline; 2. Granular and fatty granular; 3. Waxy; 4. Epithelial. The waxy casts are said to resemble in many respects the hyaline, but possess greater refractive powers, and have generally a yellowish colour; they are also more friable, and their borders, are, as it were, notched. They offer more resistance to reagents than do the hyaline casts, but are easily coloured by carmine and iodine. The waxy casts are met with most frequently in interstitial nephritis. They have no particular connexion with amyloid degeneration of the kidney. Hyaline casts, he states, may be found in normal urine. They are also met with in various other affections than those of the kidneys, and even where there is no albuminuria.

In Lectures IV. and V. the cirrhotic kidney is considered. As has been stated above, the author agrees with English observers in thinking this a distinct affection. The naked-eye and microscopic appearances are first minutely described. He accepts the general view that the condition is one of primary cirrhosis, and that the affection of the tubules is altogether secondary. The thickening of the inner coat of the arteries, which is so frequent in the advanced cirrhosis of all organs,—as, for example, the lung—is noted, but it is stated that G. Johnson's observation as to the thickening of the middle coat has not been confirmed. We must express surprise that Professor Charcot has not recognised this condition, which is so constantly present. Professor Charcot believes that the polyurea is the result of the cardiac hypertrophy. The albuminuria is simply the effect of the excess of tension in the arterial system of the kidney. Uræmia is said to be the natural termination. A time arrives when those portions of the organ which heretofore were unaffected, and which were able to carry on the function of the organ, become involved, the urinary secretion is considerably restrained or suppressed, and uræmia appears. In the earlier stages uræmia is due to failure of the cardiac action, the result of which is diminution or arrested secretion of water. The importance of lead as a cause of interstitial nephritis—a fact which has been denied by some recent observers—is maintained. Professor Charcot questions the view that albuminous retinitis is the result of atheromatous alterations of the retinal arteries, and justly observes that if this were the case the retinal affection should be frequently met with in old people, independently of renal disease.

In Lecture VI. the large white kidney is treated of. The author differs from Grainger Stewart in thinking that the inflammatory nature of the affection which is indicated by the term parenchymatous, has not yet been demonstrated. The author is of opinion that the large white kidney may undergo secondary contraction, and agrees with George Johnson (*Med.-Chir. Transactions*, vol. xlii., 1857), that the two forms (primary and secondary cirrhosis) can always be distinguished anatomically. He denies that the large white kidney ever follows scarlet fever. He states that hypertrophy of the heart, cerebral hæmorrhage, albuminous retinitis, etc., do not belong to parenchymatous nephritis, or show themselves only at the period of atrophy. He agrees with Bartels in thinking that uræmia occurs in those cases in which large quantities of water are rapidly lost from the system by other outlets than the kidneys.

In Lecture VII. a brief account of glomerulo-nephritis (scarlet-fever kidney) is given. The waxy form is then described. The author rightly lays stress on the fact that the amyloid condition is very generally complicated with other changes (interstitial or parenchymatous), and that the clinical conditions are correspondingly modified.

The translator has done his work well. The book is well got up, and is illustrated by two excellent chromo-lithographs and some woodcuts.

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*Manual of the Principles and Practice of Operative Surgery.* By STEPHEN SMITH, A.M., M.D., Surgeon to Bellevue and St Vincent Hospital, New York. Boston: Houghton, Osgood, & Co., 1880. Pp. 662. Woodcuts, 733.

THIS compact work is an enlargement of the author's valuable *Handbook of Surgical Operations*, published in 1862, and specially designed for military practice. It is now enlarged and altered so as to suit the exigencies of civil practice as well, and forms a most admirable compendium, containing, as it does, in a wonderfully small space and with excellent arrangement, every information needed by a student of the practical side of the art of surgery, excluding the organs of special sense.

There is an interesting chapter, very concisely put, on what the author calls the principles—including the obligation, the examination, the preparation, the hæmorrhage, the anæsthesia, the operation, the emergencies, the dressing, the appliances, the repair, the cicatrization. After this introduction, the different regions, with the operation performed on each, are taken in succession.

Good authorities are selected and freely quoted from, and most carefully acknowledged. Nearly all the better-known surgeons in America, Great Britain, France, and Germany are laid under contribution. The only name conspicuous by its absence is that of the author himself, who rarely indulges in the too seductive pronoun which asserts personal existence.

The work is profusely illustrated by woodcuts, varying much both in their origin and excellence, but nearly all conveying instruction.

We have much pleasure in recommending this work as a most useful one either to student or practitioner.

### *Sciatica, Lumbago, and Brachialgia; their Nature and Treatment.*
By HENRY LAWSON, M.D.

THE object of this book is to advocate the employment of morphia hypodermically in the above diseases, to the exclusion of all other methods of treatment. The author himself was a great sufferer at one time from sciatica, and consequently writes feelingly on the subject—too feelingly, perhaps, for we think he speaks rather strongly against other methods and other medical men's opinions. The book is interesting to read, though somewhat extensive. Notwithstanding this, there is at least one point not discussed. Dr Lawson seems never to have heard of acupuncture as a means of treating sciatica. He makes some reference to needles, but seems to know nothing of the method employed by us in Edinburgh, and which we find so successful. Nerve stretching also is not referred to. There are some points in the book which are specially interesting, notably the author's experience that sciatica is usually associated with derangement of the digestive system. This should be borne in mind, especially by those who look upon this disease as purely local, into which error we think Dr Lawson seems to fall himself. Dr Lawson is very positive in his statements as to the benefit invariably following morphia injections. From this we beg to differ, having seen cases where the remedy was either ineffectual or even injurious.

## *Pott's Disease; its Pathology and Treatment.* By NEWTON M. SHAFFER, M.D., New York.

OUR author differs from those who consider that disease of the spine always has a traumatic origin. He considers that the disease is an osteitis which may occur on slight provocation, but is essentially due to a peculiar condition of the system which may be hereditary or acquired. Dr Shaffer divides the disease into three stages—the first, febrile; the second, pain; the third, deformity; The first is often overlooked. The pathological condition described is that of caries as it is found in any osseous structure. As to treatment, Dr Shaffer is opposed to all attempts to straighten the spine when curvature has commenced. He reverts to the old opinion, that where you have loss of substance you must have deformity as a necessary part of the cure. Dr Shaffer approves of support combined with constitutional treatment. While he points out that mechanical means alone cannot cure caries, he, like many others, advocates a special mechanical apparatus of his own. We approve, however, of his arguments against forcible extension, which should never be attempted even though such a treatment seems at first to relieve all the patient's distressful symptoms. We remember well what we were taught by the sound practical pathologists of the past generation, that caries of the vertebræ implied loss of substance, and that where this had advanced to any extent a certain amount of approximation of surfaces, with corresponding angularity, was essential to a sound and permanent healing. When this is fully borne in mind, mechanical support to the extent essential for enabling the patient to take open air exercise will do good; but when this is forgotten, and extension and undoing of curvatures attempted, failure and injury are sure to result.

WE have received a somewhat extensive volume (192 pages) on the subject of Cancer by Mr Robert Mitchell, M.R.C.S. We have been unable to read the book through, as it is very prolix and filled with repetitions; but from what we have read we gather that Mr Mitchell considers that cancer is due to some vitiated or deranged condition of the generative system. Notwithstanding all that he has written, Mr Mitchell says but little on the subject of treatment beyond showing a favourable leaning to injection of acetic acid and starvation of the patient. We cannot, we are sorry to say, recommend the work to busy men.

WE have before us Mr Adams's papers on the Treatment of Contraction of the Fingers and Depressed Cicatrices, as published in a separate form. The little book is well got up, and the engravings are most beautiful. We remember reading the papers in the *British Medical Journal* with much pleasure and profit. The engravings add very much to the value of the present form of publication. Mr Adams agrees with those who consider that the deformity is mainly, if not wholly, due to contraction of the palmer fascia, and not to the tendons. As to treatment, Mr Adams recommends gradual extension by a suitable apparatus in recent and slight cases, and subcutaneous section in severe cases. Mr Adams considers the after-treatment by suitable splints as very important. The shape, adaptation, and *modus operandi* of these splints are well shown by woodcuts. Mr Adams's method of treating depressed cicatrices is by subcutaneous section and raising the cicatrix by transfixing with needles. The needles are removed on the third day, and the cicatrix permitted to attach itself again. The cicatrix is not obliterated, but unsightly depressions and puckerings are mitigated. We gladly recommend the work to all practical surgeons, though the name and fame of the author should be sufficient recommendation.

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*Outlines of Medical Treatment, intended as a Companion to the Student's Guide to Medical Diagnosis.* By SAMUEL FENWICK, M.D., etc. London: J. and A. Churchill: 1879. Pp. 375.

WHILE by no means friendly to the condensation of so vast and important a subject as medical treatment within so narrow limits, yet we must allow that this book is less open to objection than others of its class. Dr Fenwick has done his work, on the whole, well, and the perusal of his pages will be of much advantage to the student, provided he does not adhere too closely to rule in the treatment of his patients. We always hold that each individual case must be treated on its own merits, and not empirically by the rules laid down in text-books. Many of the author's suggestions for treatment are open to criticism. For example, we doubt the advisability of forcing a patient suffering from hæmoptysis to sit up during the attack; and still more we question the utility, or even the safety, of administering an emetic of sulphate of zinc even in that form of bleeding from the lungs in which Dr Fenwick recommends the adoption of such a course. Then, again, the author dismisses in a short paragraph of a dozen lines the antipyretic treatment of the feverish state by means of quinine, salicine, and similar preparations. Surely so important a form of treatment deserved fuller notice. But while there is much with which we cannot agree, and while there is everywhere that feeling of superficiality which can hardly be avoided in such a book, yet this work may prove useful in the hands of any one who will not adhere too rigorously to the rules which it lays down.

*Bibliotheca Dermatologica:* Catalogue of Cutaneous Literature in the Library of HENRY G. PIFFARD, M.D., Professor of Dermatology, University of New York. New York: 1879.

WE have been favoured with a copy of this catalogue, which though confessedly not a complete bibliography of the literature of skin diseases, will still be found valuable as a means of reference to many of the most important publications on an interesting branch of medicine

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*Il Clima di Catania.* Del Dott. G. B. UGHETTI. Palermo: 1879.

*The Climate of Catania: a Contribution to the Medical Climatology of Sicily.* By Dr G. B. UGHETTI.

AN Italian gentleman, on returning from London to his natal city of Catania, was requested to give a lecture descriptive of the wonders of the great metropolis of the west. To this he readily assented, and before a numerous and brilliant audience proceeded to relate the most striking characteristics of London—its immense size and enormous population and traffic, Westminster Abbey, St Paul's, the Houses of Parliament, the Parks, the Underground Railway, Thames Embankment, etc., etc. The assembly accorded a respectful and sympathetic attention to these details; but when he came to describe the Thames Tunnel, they all became disciples of St Thomas at once: the murmur was, "Zitto, amico! carry thy wool to another market! We can't stand *that*."

If the Cataniese could not be brought to believe in the Thames Tunnel, there is one of their number who has a perfect faith in Catania and its paramount claims as a winter climate and general health resort. Dr G. B. Ughetti has recently published in Palermo a short treatise of eighty-six pages, entitled *Il Clima di Catania: Contribuzione alla Climatologia Medica della Sicilia*, in which an endeavour is made to advance the claims of that city much in the same manner as Cougnet Alberto has celebrated those of San Remo, and begins by referring to the difficulties of choice which frequently embarrass physicians when chest patients consult them as to their most eligible habitat; some, it appears, throwing before the sufferers a handful of names and allowing them to make the choice, like Montegazza's Dr E. recommending to poor Emma Madeira or Iceland, with equal indifference, displaying thereby to the laity the uncertainty that prevails in our science with regard to climatology. After a modest definition of the scope of his treatise, the obstacles to the elaboration of a complete study of the subject from the paucity of observations and observers, among whom he cites Vivenoth,[1] Veragut,[2] Boltshausen,[3] and more especially Schivardi,[4] the latter of whom, while detailing the peculiarities of Corsica and the Balearic Isles, he, the most learned of Italian climatologists, omits mention of Sicily entirely.

In his second division Dr Ughetti proceeds to define climate and its constituent elements. These he enumerates as (1) temperature, (2) wind, (3) humidity, (4) atmospheric pressure, (5) the state of the sky, (6) electricity and ozone, (7) the purity of the air. Under each head a number of intelligent and sensible statements are made, none of which call for much remark—unless that, while depicting the gaiety, mettle, cheerfulness of southern populations, arising from the splendour of their skies, he attributes the *spleen* of the English and their frequent suicides to their gloomy, cloudy atmosphere. This idea, so common among southern Europeans, is well known not to be borne out by the accurate statistics of modern times.

The third section, specially devoted to the climate of Catania, and based on observations taken at the Meteorologic Observatory of the University, situated 31·23 mètres above the sea level, given by Professor D. Macaluso and his first assistant-engineer, F. La Porta, is what will best repay our attention. The author says:—"A glance at the map of Sicily is sufficient to give an exact idea of the advantageous topographical position of Catania. Placed in the bend of an ample gulf, it has the Ionian Sea to the east, Etna to the north, and on the west and south an extensive and fertile plain." This city has therefore a bulwark 3313 mètres in height, which in winter defends it most efficaciously from the northern winds. It has a calm blue sea, which refreshes it with its breezes in the summer; while at all seasons it is garlanded with exuberant vegetation and a sky truly enchanting.

That series of high-levels leading from Catania to the more elevated villages of Etna, situated 600 mètres above the level of the sea, form one of the richest and most flourishing regions of the island—a continued succession of orchards and vineyards, of villas and villages. On these volcanic ridges are gathered, so to speak, the vegetation of all latitudes—from the luxuriant flora of the tropics to the rigid and severe of the Alps; from the palm that mirrors itself on the sea to the pine which marks the highest limit of the arboreal vegetation.

Catania, with its 90,000 inhabitants, occupies an area much more extensive than required by this number in other cities. This amplitude originates in the width of the streets, the numerous gardens which embellish the houses, and to the moderate height of these houses, few of which have more than three flats, the greater number less. Such an arrangement, excellent from a hygienic point of view, allows the city to fully enjoy that light and that air which nature so lavishly diffuses on it. The streets are for the most part wide and straight, paved with lava, and remarkably clean, so that in winter even, half an hour after a heavy shower, they become as dry as in a summer day.

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[1] *Palermo und seine Bedenlung*, also *Klimatischer Curort.*

[2] *Catania als Klimatischer Wintercurort.*

[3] *Nouveau Guide de Catane.*

[4] *I soggiorni d'Inverno.*

*La via Etnea*, the principal artery of the city, in which are situated the most important public and private edifices, is not only the best cared for, the most elegant, but the most imposing from its site. Rising gently for three kilomètres from the Giardino della Marina to the Piazza Giornia in the direction of Etna, it presents a marvellous picture, such as, Rèclus says, we would require to go to the Andes of tropical America to see anything like it. But besides this principal street and others similar, dry, clean, long, and wide, Catania possesses two public gardens, always green, ever smiling—one in the vicinity of the sea, the other in the middle of the Via Etnea, on a little hill which art and nature have competed to render enchanting. It is easily understood what comfort these places must afford to the spirits of the native of the north, who in the depth of winter can walk under a limpid sun among green groves, and gather the flowers that engirdle the statues of Stesicoro and Bellini, while he remembers the cities of countries covered with a deep stratum of snow.

*Temperature.*—As to its temperature, Catania is to be classed among the climates *termici* of Fonssagrives, among the *mild* climates of those who admit of this subdivision, or among the *warm* climates of the generality of climatologists. Apart from the analysis of the following thermometric tables, if we want to express the gradations of this country in the language of temperate climes, we might say there were only two seasons,—a summer of seven months, from May to October, and a spring extending from November to April. Winter might be termed non-existent. The summer, though sufficiently long, and, compared with other Italian cities, warmer, still is most endurable, and the suffocating heat of midsummer in Rome and Florence is rarely experienced. At this season the hours when the heat most prevails are in the morning till ten o'clock, and in the evening from five or seven till sunset. In these hours the air is at the calmest, whereas in the others, when the thermometer reaches its highest grade, a light breeze blows constantly from the sea towards the city, producing a delightful sense of freshness on the cutaneous surface, and renewing the air in the houses. The medium temperature of Catania, calculated on the average of ten years from 1867 to 1878, is 18°·5. In comparison with this we may cite that of some of the cities in Italy which are among the principal winter stations,—as Turin 11°·89, Milan 12°·80, Bologna 13°·87, Florence 14°·70, Rome 15°·37, Venice 13°·68, Genoa 16°·21, San Remo 15°·69, Ancona 15°·86, Leghorn 15°·10, Naples 17°·44, Palermo 17°·50, Reggio 18°·16. In three other localities, apart from Italy, we may quote Malaga 19°·1, Cairo 22°·2, and Funchal, in Madeira, 18°·3.

Generally in Catania the temperature is not below the average, unless from the first hours of the night till six in the morning. It is lowest some hours before sunrise, and ascends rapidly to reach its maximum at half-past one or two P.M.

In 1876 the maximum temp. was 35°·9 ; 1°·3 minim.
" 1877 " " 40°·6 ; 0°·2 "
" 1878 " " 34°·8 ; 3°·2 "

The vegetation truly African, covering the coasts of Sicily with orange groves, gigantic cacti, with agaves which display the peduncles of their flowers to some mètres in height, the fan-palms and most elegant date-palms, speak much more eloquently than any statistic tables can as to how high the winter temperature can ascend, since we know that a cold of some degrees hardly below zero would fatally strike the development of these plants. But from the vegetation alone we cannot derive a solid criterion of the suitability of a climate in a therapeutic point of view, as this expresses too little as to the medium temperature. Hence the necessity of interrogating the thermometric data.

With regard to humidity, in four years, from 1871 to 1874, the average was, absolute humidity from 9 A.M. 11°·12, at 12 P.M. 11°·66. The average of relative humidity was at 9 A.M. 0°·68, at 12 P.M. 0°·64. On the average of twelve years, as observed in the pluviemeter of the observatory, there was found a maximum of 805 mm. in 1873, a minimum of 239 mm. in 1875 ; an average of the whole series, 527·75. The wettest month is November, the measure of which is 99·83 ; the least rainy is June, which gives 3·75. With the exception of 1876, there was found, in all the years referred to, at least one month when not a drop of rain fell. In the twelve years this month was, August seven times, July five, June five, May four, September three times. In 1867 no rain fell for four months consecutively.

From diurnal tables containing the details of the above number of years it appears that the annual average in Catania:—

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| Serene Days, . . . | 221 |
| Cloudy " . . . | 104 |
| Rainy " . . . | 40 |

It is scarcely necessary to add that in Catania there is neither snow nor mist. On some winter mornings there is barely perceptible a slight veil of mist on the sea, which is rapidly dissipated by the rising sun.

*Winds.*—One of the few disadvantages of the Mediterranean winter stations is that of all being more or less exposed to winds. Venice is so from all quarters ; at Mentone, and still more at Nice, days perfectly calm are rare ; at Pisa the north wind blows frequently; at Cannes the N.E., the N., and N.W. winds dominate sufficiently, so much so that Buttura writes:—"J'entends souvent les malades se plaindre du vent bien plus que de la pluie, bien plus que du froid; mais c'est une condition fatale de notre position au bord de la mer." It is true he adds afterwards that "le vent a son bon côté, en tonifiant, en fortifiant;" but the greater number of invalids who seek a winter residence require to be fortified and tonified in quite a different manner. They need an air that is both tepid and calm; for them a climate is necessary that does not rob them of the benefits arising from a suitable temperature by the rude impetus of the wind. Our city, which is situated on the brink of the sea, has also its winds, and no wonder; but these are neither so frequent as elsewhere nor too injurious in their direction. We have referred to the situation of Catania, and pointed out that Etna rises immediately to the north of it more than three kilomètres in height, thus defending it from the boreal blasts. In the table of wind observations for 12 years we never find the wind in the N. or N.N.W., and only once, in August 1874, in the N.N.E. The N.W. and N.E. are so infrequent that in the winter half of all these years we find the first twice, in March and April 1867, and the second once, in December 1875. In the sixteenth table we observe that the prevailing wind is the S.E., but it is generally the last that blows with almost absolute regularity from 10 A.M. to 4.25 P.M., and renders so supportable that portion of the day that would otherwise be the hottest.

In Sicily, as in most of the southern countries, it is remarked that the nearer they are to the equator the variation of barometric pressure is much more in relation to the direction and intensity of the winds than to clear or rainy weather, which circumstance withdraws the merit of prognosticating settled or wet weather from the barometer which it enjoys within certain limits in northern countries. In winter the air is excellent all over the city; in summer it is freshest and healthiest at the most elevated localities. The malaria arising in the vast plain to the south of the town is perceptibly limited in its influence to some suburbs extending in that direction. The rest of the city enjoys a complete immunity at all seasons.

"The invalid seeking health under our glowing skies need suffer no embarrassment in the selection of a dwelling-place. The preference, however, should be given to the central points, as more sheltered from the winds. A house with doors and windows directed to the south is the more eligible. At all seasons, and especially in winter, the air of Catania is but little charged with dust, and this not only in the inner part and in the finest streets, where the cleanness of the pavement and the moderate movement of vehicles give rise to this, but also in the roads of the environs, especially those running along the windings of Etna, which, being firm and even, render agreeable, nay possible, excursions to the neighbouring villages to individuals with irritable chests. As to potable water, although that element is not always first-class, and some more or less imbued with organic substances, we can only say that in this respect we are no worse off than other cities. The water of the Amenano, which flows abundantly at a low point of the city, near the Piazza del Duomo, is the most esteemed, and is easily procured from the water-carriers, who bring it to the houses. Besides this, there are numerous wells of good quality and fit for domestic use. Catania lacks for none of those elements, apparently necessary, extraneous to a study of pure climatology, but practically important and not to be overlooked when one has to recommend one or other residence to a patient. Who would send an invalid to a climate that would stimulate his appetite when nothing was to be found to satisfy it? At Catania excellent hotels and first-class aliments enable one to enjoy easily all the other advantages with which nature has enriched this fortunate country."

The author's friend, Engineer Ficheta, in a work shortly to see the light, gives statistics of the annual death-rate for ten years from 1868 to 1878, which varies from 44 per 1000 in the first-mentioned to 32 in the last; the lowest is 26 per 1000, in 1873, average 36—not exactly brilliant when compared with our own. In various months of 1878 the births exceeded the deaths by 0·71 per 1000.

On the whole, Dr Ughetti makes out a very good case in behalf of the claims of his own field for professional exercise, and winds up with some very pertinent remarks, of which the following is the English:—"I wish to mention, once for all, that this climate, as also any one whatever better, is not devoid of disadvantages, and that the method of utilizing it enters largely in the curative results that are possible to be derived from it. No physician should forget to repeat a hundred times the most simple truth to the patients whose case it is his province to direct. Come from long distances, attracted by the curiosity of places and manners, necessarily unoccupied the greater part of their time, they are overcome by the temptations to go out every day and every hour of the day. Lightly dressed, they expose themselves in this manner to sudden blasts of wind and rapid changes of temperature, ever possible in any maritime station. To go out only in the warmest and calmest hours, to avoid certain resorts too much exposed to air-currents, to dress sufficiently and not too lightly, and to adopt the precaution of carrying an overcoat to put on when requisite, should always constitute the point of departure of the treatment. The value of a climatic cure is redoubled by the most suitable mode of utilizing it; and, as in the case of any other therapeutic agent, it is absolutely necessary to know how to render it available by prudence and method, if we wish to derive those results it is capable of producing."

*Sister Dora: a Biography.* Third Edition. London: C. Kegan Paul, & Co. 1880.

We think that this interesting and well-written biography may be appropriately noticed and recommended in our pages, as furnishing a very high ideal to the crowds of young persons who are now fired with the ambition of becoming hospital nurses. It records the history and remarkable experiences of a lady whose active life was spent in connexion with a small institution in the town of Walsall, not far from Birmingham. To many readers much that is related concerning her must bear an aspect bordering on the marvellous; but after a careful perusal we are shut up to the conclusion that "Sister Dora" was a woman gifted by nature with qualities both of mind and body so rarely met with, and yet so admirably suited for her position, that the appearance of the incredible in what she accomplished was no more than can be explained by her extraordinary mental, moral, and physical endowments. She was exceptionally beautiful, handsome, tall and strong, to begin with, fascinating every man, woman, or child who saw her; she was a thorough lady in her manners and demeanour; she had a natural courage strengthened by fox-hunting and out-door exercises in her youth; her powers of observation were great; her judgment was clear, active, and prompt; she had a keen sense of humour, and always took a bright view of things; she had a perfect use of her hands, which were at once delicate and powerful; and, above all, she was animated by an intense sympathy for human suffering which no selfish desire to spare herself ever interfered with. But to understand her character aright, and all the secrets of her power, the book must be read and studied without prejudice. It is because valuable lessons may be gathered from it that we recommend it to all, male and female, who desire to be of service to the sick and wounded. The volume is a small octavo of 260 pages, and ought to be extensively circulated.

# Part Third.

## MEETINGS OF SOCIETIES.

### OBSTETRICAL SOCIETY OF EDINBURGH.

#### SESSION XXXIX.—MEETING V.

*Wednesday, 28th January* 1880.—Dr Keiller *in the Chair.*

I. *Professor Simpson* showed, through the kindness of Dr D. G. Hamilton, a large sub-peritoneal fibroid tumour attached by a narrow pedicle to the anterior border of the summit of the uterus. It was found post-mortem in the case of a woman who had died somewhat suddenly from heart-disease. The pedicle, as they would see, was just one such as an operator would delight in.

II. *Professor Simpson* showed also a UTERUS WITH AN INTRAMURAL FIBROID of the size of an orange in the right and anterior wall, sent him by the courtesy of Dr Inglis, of the Royal Asylum, Morningside. The cavity of the uterus, when laid open, showed an adhesion at one spot between the anterior and posterior walls. Two small elevations could also be noted.

III. *Professor Simpson* then read his paper on the REDUCTION OF THE FŒTAL HEAD, which appears at p. 865 of this Journal.

*Dr Keiller* invited discussion, and availed himself of the opportunity, while occupying the chair, of recommending the attending Fellows to give the Society the benefit of their individual opinion and experience.

*Dr Underhill* had listened to Professor Simpson's paper with great interest. The subject was one of much practical importance, and he thought it was greatly to the advantage of the Society that such subjects should be every now and again brought before it by competent hands, especially when, as in the present case, the author of the paper had a new or improved method of dealing with these dangerous cases to put forward. He could not quite agree with Professor Simpson in his denunciation of the crotchet, for he at least had more than once succeeded in delivering with it when he had failed with some of the other instruments. The crotchet had the great advantage of working entirely within the fœtal skull; and thus, while, if carefully handled, it avoided the risk of injuring the maternal parts, it at the same time did not add anything to the bulk of the mass to be dragged through the contracted pelvis. On the first occasion on which he used the cephalotribe (Matthews Duncan's) he screwed up too tightly, so that the button of the joint broke. He then tried the cranioclast, and found it work efficiently. On a recent occasion, in a rachitic pelvis with a conjugate of 2½ in., he had attempted to bring down the head with the cranioclast, but found it slip. He delivered ultimately with the crotchet. Professor Simpson had brought the whole matter of the reduction of the fœtal head before them very clearly, and described his own method ably. It certainly promised well, although they would probably have some difficulty in perforating the proper point in the base. If this were overcome, then the small amount of compression Dr Simpson described would probably suffice to deliver. One method not described by Dr Simpson was that of Perfect and others, who first perforated and broke down the vault, and then, converting into a face case, delivered with the crotchet. In this way they extracted through pelves measuring 1½ in. in their conjugate diameter. He thought that this plan might be more generally used.

*Dr A. D. L. Napier* thought that while Guyon's instrument was perfect in the hands of Dr Simpson, it might be otherwise in the case of country practitioners. He remembered one case at Fraserburgh, in 1873, where he attempted to apply forceps, but failed. He therefore perforated and used the cranioclast, but the woman died during delivery. The pelvis was contracted, both transversely and antero-posteriorly. Guyon's instrument would have been valuable in this case. In many cases, however, simpler instruments sufficed. Thus, when the cause of arrest at the brim was hydrocephalus, the perforator and crotchet were often sufficient. Dr Simpson's plan was undoubtedly a valuable one, and he hoped his inventive ability would soon perfect the apparatus.

*Dr Ballantyne* asked if Dr Simpson was conscious when the trephine passed through the bone.

*Dr Simpson* explained that this was the case.

*Dr George Dickson* had assisted in a case where the forceps slipped and the cephalotribe—Inglis's modification of Matthews Duncan's—broke. They then tried to perforate with a brace and bit, but failed. They succeeded in perforating with a large pair of scissors, and then extracted with the forceps. The mistake made was that of not perforating before applying the cephalotribe.

*Dr Gordon* thought the fewer the instruments the better. It was alleged by many that the cephalotribe would break up any base; and if so, there was surely no need of new instruments.

*Dr Keiller* considered Professor Simpson's paper a valuable one. The subject, indeed, was such an important one, and had been treated so fully on the present occasion, that the varied and practical points referred to demanded studious consideration before one could venture to speak of them at any length. He (Dr Keiller) had endeavoured to follow the more special views expressed, and to these he would now very briefly refer. While Professor Simpson was reading his able paper, he (Dr Keiller) could not help thinking of the materials of a somewhat similar communication which he had in his possession, and which he ought to have read before the British Medical Association when it last met in Edinburgh. While he therein had noted observations corresponding to and corroborative of some of those now made, the views he had been led to entertain as to the best modes of craniotomy procedure were by no means in accord with those advocated in the present paper. He hoped, however, that the basilysis efforts would, in Professor Simpson's hands, be soon turned to good account, although he greatly feared the cumbrous, if not dangerous, aspect of the instrument now exhibited. The first observation he would like to make was in regard to what Dr Dickson and Dr Gordon had just referred, viz., the importance of our instruments being kept as few and as simple as possible. There was seldom much good resulted from multiplicity, and far less from complexity, in respect to operative measures; for, as a rule, the more simple and handy our artificial aids in cases of emergency are made, the more useful and the more procurable they will in all probability be found. The obstetric practitioner was often enough awkwardly situated in regard to the ready access to suitable appliances to enable him to finish his required work, and his ingenuity was not unfrequently sorely pressed while endeavouring to discharge duties of the most anxious and most vital importance. Dr Keiller, in referring to such cases, mentioned one of an extraordinary kind which he, along with the late Sir James Simpson, was specially summoned to give evidence regarding. In this case the practitioner in attendance was driven to use a common pair of cobbler's pincers as a craniotomy instrument, which unquestionably crude mode of procedure, together with its unfortunate results, led not only to legal investigation, but otherwise to very disagreeable consequences. It may be that the having recourse to such clumsy and apparently unsuitable appliances ought, as a rule, to be considered unjustifiable; but, nevertheless, if a qualified practitioner does his best to relieve suffering and save life by attempting to aid the inefficient efforts of nature through the use of any likely measure within his reach, he is legally as well as morally entitled to the benefit of the doubt as to anything approaching to intentional criminality or punishable blame. Dr Keiller and Sir James Simpson were at the time subjected to the reverse of mild criticism from certain quarters, for appearing in Court and giving their special evidence in this notable case; but they had done so entirely on the broad and fair enough ground now referred to, and in accordance with which the Court authorities were led to adjudicate. He having personally put most, if not all, of our well-known embryotomy instruments to the best because most trying test, that of clinical experience, could not agree in what had just been stated concerning the cephalotribe and other of our ordinary and well-proved craniotomy appliances, which, notwithstanding what had been said to the contrary, would not so readily be set aside, especially by the anything but handy-looking weapon to which Professor Simpson had directed their special attention on the present occasion. While expressing his faith in the power of a well-constructed and properly handled cephalotribe, which he had on many trying occasions tested, and as his exhibited series of cephalotripsy preparations—the Hibernian "army of martyrs"—fully proved, it was, he held, a mistake to imagine, as Professor Simpson seemed to do, that it was necessary to attack so as to completely crush the bones of the base of the fœtal skull. This operation of so-called "basilysis," this spearing and comminuting of parts which seldom or never seriously interfere with the termination of labour, seemed uncalled for. He had here and elsewhere often argued and demonstrated, that neither the bones of the base nor those of the face ever in marked pelvic contraction materially interfered with cephalotriptic or other craniotomy necessity. According to his experience, the base could usually be so managed, and the crushed head so extracted, by means of an efficient cephalotribe applied and used in accordance with the necessities of the case, and with a studied regard to the special mechanism of the labour, without having recourse to "basilysis," or, indeed, to the extreme smashing power too often authoritatively advocated. He had as yet no reason to change his entertained views and teachings in regard to this most important practical matter, and confessed that the ponderosity and power displayed in some of our cephalotribe and other midwifery engines were such as to have often led him to remark that they might serve the very unequal purposes of "quarrying stones and crushing babies' bones." Professor Simpson had in his paper so gone in for the cranioclast and cranioclasm against the cephalotribe and cephalotripsy, that he (Dr Keiller) could not help saying that, knowing the history and the practice of both, he was much more disposed to look with much less favour, if not with great disfavour, on the former compared with the latter. He had been much disappointed in the operation of cranioclasm, and mentioned his special objections to the cranioclast as a craniotomy instrument.

*Professor Simpson* thanked the Fellows for their kind attention and interest in his communication. He certainly sympathized with Dr Keiller's wish that their instruments should be as few and simple as possible, and also in his statement that Guyon's instrument was cumbersome. That very consideration had prejudiced himself against the apparatus, so that, although he had shown it to his class year after year, the idea of using it had never occurred to him until this case. The point he wished to-night to fix home was the necessity of aiming at the breaking up of the base of the fœtal head. He of course agreed with Dr Napier and Dr Keiller as to there being a group of cases where this basilysis was unnecessary. He remembered, when taking his holiday in the English Lakes, conversing with a doctor there, who related to him a case where he had to perforate, and where the only instruments he had were in his pocket case. He had to perforate with a knife, and extract with a hook hastily manufactured by a smith who lived in the neighbourhood. The child was born alive, and survived. It was in the cases of contracted brim that comminution was imperative. When the brim was thus contracted, the problem before them was how to reduce the head so as to minimize the danger to the mother. With the cranioclast and cephalotribe they could undoubtedly pull the head through the pelvis. But very often this had to be done with a force exhausting to the practitioner's muscle and damaging to the mother's tissues. The head, more particularly when it was grasped with the cephalotribe, was always elongated in one diameter, and laceration of the maternal structures inevitably ensued. In this way the cephalotribe was specially dangerous. It was interesting to note, in the discussions as to the relative value of the cephalotribe and cranioclast, the older practitioners of thirty or forty years' standing holding for the cephalotribe. It seemed as if, by long practice and frequent demonstration, they had got familiarized, mind and hand, to its use. It was really striking that an obstetrician of Karl Braun of Vienna's experience should pronounce so strongly for the cranioclast. Braun's opinion, and the paper on his results with it by Karl Rokitansky, had led to its general adoption in Germany. Dr Gordon seemed to think the cephalotribe a finality. They were a long, long way from that, as the many forms employed clearly showed. He remembered the unfavourable impression as to Dr Duncan's cephalotribe which he received on reading Dr Duncan's paper, and which was confirmed by the condemnatory criticism of Dr Macdonald and others who had heard it read. He had not imagined that any one had ever thought of employing it, and was not at all surprised to hear to-night that the only Fellows who had tried to deliver with it found themselves left in the lurch, and obliged to have recourse to other instruments. We had at present no perfect instrument, *i.e.*, no instrument such that the head crushed by it would mould itself to the pelvis. Then the cephalotribe, as Credé and others admitted, sometimes slipped. Few and simple instruments had been wisely demanded by Dr Keiller. His own impression was that ultimately, with an instrument such as he had described to them, the base would be so comminuted that uterine effort alone would be sufficient to drive it through. Dr Underhill had alluded to the tilting of the head so as to convert it, after the vault was broken down, into a face case. This he hoped would become an unnecessary experiment. Dr Barnes had discussed the whole matter sensibly. In Osborne's case the child was dead, and the brim larger at one side of the promontory. They should always keep in mind that the manipulation necessary to bring about the face presentation was dangerous to the mother. This was avoided by the perforation of the vault and then of the base. This plan was, of course, equally applicable to the aftercoming head.

*Dr Keiller* had seen Sir James Simpson apply his cranioclast unsuccessfully, and had done so himself, and mentioned a case where Sir James Simpson used the cranioclast, left the case, and then ultimately had to use the cephalotribe. Professor Simpson had spoken of the older practitioners who clung to the cephalotribe as an instrument from their long experience of it in practice and tutorial demonstration. He wished to identify himself with these, as partly explaining his adoption of the cephalotribe as the instrument to be used for delivery in contracted brim. He had not, however, become wedded to the practice he referred to as sound from mere class-room attempts at demonstration, but rather from bedside observation and varied operative manipulation, without which instrumental notions, however novel or ingenious, were comparatively of little practical avail. He (Dr Keiller) greatly preferred being guided by personally testing the practical value of instruments than by being led by mere literary statements.

# Part Fourth.

## PERISCOPE.

### MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By Angus Macdonald, M.D.

Gynæcology as related to Insanity in Women is the subject of a paper of some interest, recorded in the *Archives of Medicine* of New York, by Dr Alexander J. C. Skene. In examining the patients under his charge in the King's County Insane Asylum at Flatbush, Dr Skene found it necessary, owing to the extreme difficulty of obtaining information of value to the gynæcologist, to adopt a special method of investigation differing materially from that which may be employed in dealing with sane patients suffering from disease of the generative organs. All will agree that insanity is often caused by diseases of the procreative organs, and, on the other hand, that mental derangement frequently disturbs the function of other organs of the body, and modifies diseased action in them. Either may be primary or causative, or secondary and resultant. Up to the present time the effects of disease of the sexual organs in women in causing and keeping up insanity has been more correctly studied than the influence which insanity exercises on the sexual organs. The rule has been to attribute insanity, when developed during the existence of uterine or ovarian disease, to reflex action. This no doubt is an important factor in the causation of mental derangement, but it is far from covering the whole ground; for there are cases of uterine disease preceding by an interval of years the mental derangement, which follows without any increase of the primary disease. In such cases, probably, impaired nutrition of the brain, the result of prolonged suffering, is the direct cause of insanity. Frequent child-bearing and prolonged lactation are likewise causes of insanity which are familiar to all medical men, and they act through their draining influence on the system. The combined exertions of reproduction and every-day labour to which so many women are subjected are often more than the strongest constitutions can endure; and in these the cause of mental failure is centric, not reflex. Insanity occurring at puberty is frequently a result reflexly of the disturbance of the organs of generation; but insanity may also occur at puberty when these organs are well developed and performing their function normally. Again, insanity due to sexual excesses may be generally traced to brain exhaustion produced by excessive functional activity of the genital organs while free from any disease. The bearing of such facts as these on the diagnosis and treatment of insane women will be apparent to all medical men. The effect of insanity on the functions of the reproductive organs is more particularly treated of in the paper. Observations were made by the author on 200 insane women ranging in age from 17 to 46. Eight of them died within six months. Of the remainder 27 menstruated normally, 30 did not menstruate at all; 4 menstruated once, 8 twice, 10 three times, 18 four times, 34 five times, 24 six times at irregular intervals, 31 seven times, and 6 eight times. This record shows to what a marked extent the menstrual function is disturbed in insane women. The impaired general nutrition has reduced the general health so far below the normal standard as to compel the individual to suspend all functional activity not absolutely necessary to life. In proof of the suspension of menstruation being due to malnutrition, it was observed that the sexual organs in most of the cases were anæmic, presenting appearances similar to those of women who had passed the menopause, only that there was no senile atrophy present. In other cases the sexual organs were found normal, the condition appearing to depend upon imperfect innervation. In cases where the menstruation was excessive, uterine disease as a rule was present. The next question treated of was, What effect does insanity exert upon diseased sexual organs? It may be fairly stated that diseases of a purely functional character of these organs tend to disappear on the occurrence of mental alienation. The same action is observed in the pathology of other diseases. The class of insane women who have simply functional disease of the sexual organs requires no special treatment from the gynæcologist beyond what is necessary to establish the fact that there exists no organic disease. When the mental derangement points to some affection of the pelvic organs, and these organs are found healthy, then the disease is centric, and treatment must be directed to the nervous system. But it must also be borne in mind that mental derangement may continue after the disease which caused it has subsided. Organic diseases of the sexual organs exercise a most important influence in causing insanity, and tend to retard recovery from it. Change of structure or position of the uterus or ovaries are examples. In such cases insanity and diseased pelvic organs act in concert to maintain each other, to the detriment of the unfortunate sufferers. The difficulty experienced in acquiring a natural and clinical history of the sexual system of insane patients is often very great. Some are incapable of affording a rational account of themselves; many are opposed to discussing their uterine conditions; while others not so opposed leave us in doubt as to the correctness or value of their testimony. In the majority of cases, therefore, the person in charge of the patient is the source of our information on these matters. The author has drawn out a method of case-taking suitable for asylum use, and which is intended to elicit the history bearing upon the condition of the sexual system. The history of the menses before insanity became developed, the effect of menses on the nervous system before and after the development of insanity, the history of disease of the sexual organs before and after the onset of insanity, are fully inquired into. Physical exploration of the pelvic organs of insane women has hitherto been beset with many difficulties. Persuasion is often useless, and forcible efforts to control them end mostly in defeat of the examiner, or injury to the patient, or both. The administration of ether or chloroform to maniacs is found by experience to be impracticable. The use of nitrous-oxide gas, however, has been found by Dr Skene to answer the purpose admirably. Besides the fact that it can be rapidly and efficiently administered through an india-rubber cup placed over the mouth, it acts, he thinks, as a valuable tonic in extreme cases of nervous debility, and in some cases improvement of mental symptoms followed, and was solely attributable to its use. Pain as a symptom, on which so much depends in the diagnosis of diseases of the pelvic organs, is lost to us when an anæsthetic is employed; but even when the patient is conscious, we cannot always tell by her behaviour whether pressure hurts or not. The same general principles which guide us in the treatment of diseases of the sexual organs of sane women form the basis of our treatment of the insane also. Local treatment for the cure of amenorrhœa can accomplish very little in the sane, but its employment is still more decidedly contra-indicated in the insane. Cervical endometritis in these patients has to be treated by some means that does not require frequent repetition; hence in most cases the hot vaginal douche, a most valuable remedy, is not available for such purpose. The same objection applies to the glycerine tampon. As a substitute, equal parts of tinct. of iodine and carbolic acid have been used, applied once a week, with advantage. For vaginitis a solution of nitrate of silver or of sulphate of zinc, followed by a tampon of marine lint changed every three days, has been found efficient. Endometritis fungosa, judging from the cases that have come under Dr Skene's care, is a common affection of the insane. These he treats by curette, neglecting the usual dilatation of the cervix by tents; and in cases where this proves insufficient the interior of the uterus is treated with carbolic acid and tinct. of iodine, not the more powerful caustics, which require prolonged rest to avoid the risk of inflammatory action in the surrounding tissues.

Two Cases of Pudendal Hæmatocele Treated by Incision, without Interruption of Existing Pregnancy, are recorded in the *New York Medical Journal* for January 1880 by Dr Edward L. Partridge. In both cases the hæmatocele was the result of accidental contusion, and in both the tumour which resulted was of considerable size, as large as an orange. Incision of their walls enabled the clots to be turned out, and but slight hæmorrhage was experienced in either case from their cavities. The author states his opinion that, in the majority of cases, subcutaneous extravasations of blood should certainly be left undisturbed by the knife;

but when the amount of blood effused is great, and its position such as to interfere with the ordinary duties of the individual, the best treatment is its evacuation within 24 to 48 hours of its formation. In support of this view he also mentions that, even if the tumour is removed by absorption, it is so only after days of pain and inconvenience, and that there is the risk of its going on to suppuration, which will require evacuation in addition.

PUERPERAL FEVER is treated of at some length in a paper by Dr Maughs, in the *Courier of Medicine of St Louis* for January 1880. The author remarks that it is a sad commentary upon our profession that, with regard to the nature and origin of this important disease, Hippocrates himself was probably as well informed as is the profession of the present day, and it is interesting to read, in the records left by the father of medicine, the details of cases of puerperal fever so faithfully portrayed that they might well be mistaken for the writings of some modern author; and yet there is no evidence to show that this disease at any time during the long lapse of 2000 years ceased to exert its influence on the puerperal female. In discussing the definition of the term "puerperal fever," the author is not inclined to adopt either of the extreme views—namely, that which includes every form of fever which may attack the lying-in woman, or that which includes all those diseases of puerperal women which are caused by the absorption of septic matter. To give such a definition as would fully express our ideas of the disease he considers to be hardly possible; yet, to make as comprehensive a statement as our present knowledge of the disease will permit, it may be called "a continued fever, communicable by contagion, occurring in connexion with childbirth, and often associated with extensive local lesions, especially of the uterine system." As to the cause, it essentially consists in the introduction into the system of septic matter, which may be either autogenetic or heterogenetic. To the production of the former type many conditions in the newly-delivered female predispose more or less. Blood-clot and shreds of decidua are left to decompose in the uterus. The raw surface of the placental site and the uterine wall, generally denuded of its epithelium, can at first offer but feeble resistance to the ingress of septic agents. If, then, puerperal women are not oftener killed by auto-infection, it is not because the poisonous elements are not present, but because they are not present until the surfaces mentioned are protected by a layer of plastic lymph, the result of healthy granulation. But the author thinks that it is not necessary for the production of puerperal fever that the woman's blood be poisoned either from within or without. If the blood be loaded with effete matter, the result of necrobiotic processes going on in her system as the result of her pregnant state, then, given this blood condition, it may only be necessary that from some traumatic lesion a rise of temperature may be produced, or, what amounts to the same thing, from some mental state the vitality is lowered, and a putrescent state of the blood results. It is from this cause, the author believes, that young women, the victims of seduction, are most apt to have puerperal fever. It is to be noted that puerperal fever is specially liable to occur in the subjects of post-partem hæmorrhage (*cæteris paribus*). Not that the loss of blood has anything to do with the infection, but the hæmorrhage is either the result of or cause of inertia of the uterus, which permits of clots accumulating and decomposing in its cavity, and allows an undue amount of thrombi to form in its sinuses. The heterogeneous sources of infection are not only much more often the sources of infection, but these cases are more rapidly fatal, and less amenable to treatment. The system offers a greater resistance to self-produced poisons than to those introduced from without. The so-called epidemics of puerperal fever have arisen from a heterogeneous source, and the author maintains that many such have occurred during the prevalence of epidemic disease of different forms, and especially of erysipelas. He remarks that all zymotic conditions are fermentative states of the blood, readily tending to putrescence, and, when coming in contact with the blood of the puerpera, find all the conditions present for the development of septicæmia or pyæmia. In reference to the pathology, there appears to be a difference in its manifestations in different so-called epidemics. In some the most prominent anatomical change discovered after death was a blood putrescence, while in others peritonitis and metro-peritonitis were the most marked phenomena. It is well known that, in cases where a sufficiently large dose of the poison has been introduced into the blood, the patient may die before any distinct macroscopical change has taken place. The treatment of this formidable disease has hitherto been a subject of endless dispute; but from our more enlightened views of its general pathology the author believes we may reasonably hope that death will soon be a rare result, while anything like an epidemic will be unknown and unfeared. It is in its prevention rather than in its treatment that the greatest good promises in the future. Where inertia of the uterus occurs after delivery, and consequently risk of auto-infection is present, the uterus should be followed down with the hand, and continuous gentle pressure maintained over it till everything has been expelled from its cavity and till it shows no tendency to relax. Ergot should also be administered with the same object. Washing out the uterus with hot water (110° F.), and painting its inner surface with tincture of iodine, are recommended. If, in spite of these, the discharges become offensive, the carbolic intrauterine douche must be had recourse to. With this treatment almost no woman would suffer from puerperal fever produced by auto-infection. But supposing a woman has already become affected with the autogenetic form of the fever, then the most we can do is to check the further supply of the poison, and this again we do by washing out the uterus with antiseptics, and further, we must sustain the patient until the poison is eliminated; quinine, brandy, milk, egg, and beef-tea are to be employed. In cases of heterogenetic septicæmia, which are much the most frequent, prevention again is infinitely the most important part of the treatment, and this consists in securing the most favourable hygienic conditions for the lying-in chamber. When the disease has become fairly established, intrauterine antiseptic washes become again of primary importance; for though decomposing animal matter may not be present in the uterus to the same extent as in autogenetic cases, yet the discharge rapidly becomes poisonous, and may still further endanger the life of the patient; and, besides, the point of absorption of the poison always becomes inflamed, and from this arises a tendency to putrescent endometritis, which is in some measure rendered harmless by the use of carbolic washes. The disease is also combated by quinine and the muriated tincture of iron. The pulse is controlled by digitalis. The object in all cases is to eliminate the poison and support the system till that is accomplished; hence the bowels should be moved occasionally, and nutritious diet employed. The hyperpyrexia must be treated by the ordinary remedies, aided by cold applied to the head and abdomen. While all cases caused by infection are necessarily septicæmic in character, yet we have cases in which septicæmia is not present in the early stage at least, and in these the lesion consists in peritonitis and metro-peritonitis. The treatment in these cases, to be successful, should be instituted early, and should be antiphlogistic in kind. It should be commenced by free venesection. Opium is the sheet-anchor in all peritoneal inflammation. The heart's action may be controlled by veratrum viride. Quinine in antipyretic doses may be given, while turpentine stupes aided by warm water, oil and turpentine enemata, are beneficial. In such cases, also, occasionally purging the patient has been followed by the best results.

An Improved Method of Treating the New-born Child, without washing, without dressing, without feeding, without bandaging, and without compressing the umbilical cord!! is described in the *Medical and Surgical Reporter* of Philadelphia, 3d January 1880. It has been asserted that one-half of all children die under five years of age, and the author believes that this mortality may in some measure be accounted for when we consider the initial treatment to which the new-born infant is subjected. The sudden reduction of temperature from the heat of the mother's vagina to that of the external air (60° or 70°), the early exposure to the risks of a warm bath, the over-anxiety as to the early feeding of the infant, each or all may form the starting-point of a train of evils which may lead to such fearful mortality. The method employed by the author is as follows:—The child, on being expelled from its mother, is laid on its right side in a comfortable position for breathing, and kept under the bedclothes till the cord ceases to pulsate. The cord is then nicked through slowly, allowed to bleed for a few seconds, stripped well to cause collapse of the vessels, and then left dangling in that condition. It dries rapidly without giving trouble. A coating of lard is then applied over the whole body except the face. The child is then enveloped in flannel and laid in some comfortable place, where it can "suck its fist or test its lungs and vocal cords." If the mother is healthy, she can suckle the infant if she feels inclined, but it is to have nothing except what it gets from her breasts. In twenty-four or thirty-six hours, when it has become somewhat accustomed to the great change of temperature, the child may be bathed and quickly clothed in napkin and gown, the bandage being applied each morning and removed in the evening.

## MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Bromide of Ethyl for Local Anæsthesia.—At a recent meeting of the Paris Surgical Society (*La France Médicale*) M. Ferrillon brought forward bromide of ethyl as a local anæsthetic. He says it is a neutral, non-irritating substance, always chemically pure. It may be used for obtaining local anæsthesia in the form of spray, in just the same way as ether. He tried it first on a thermometer; the refrigeration was much more rapid than with ether. In man the spray may be continued for a long time without causing the irritation of the wound produced by ether.—*Medical Press and Circular*, April 7, 1880.

Nitrate of Uranium in the Treatment of Diabetes.—J. Y. Dale, M.D., of Lemont, Pa., writes to the *Boston Medical and Surgical Journal* that he has found nitrate of uranium, given in from one to two-grain doses three times daily, to be an efficacious remedy in diabetes.—*Medical and Surgical Reporter*, March 20, 1880.

The Therapeutic Value of Pulsatilla.—Dr James J. Tucker of Chicago, in a communication to the *Chicago Medical Gazette*, Feb. 5, 1880, says,—"Pulsatilla is rapidly growing in favour with many practitioners. Though a very old remedy, having been known to Dioscorides and Pliny, it fell into disuse, if not into disrepute, and was not reinstated till about the beginning of the present century. I have used pulsatilla mainly in simple dysmenorrhœa, and here it has proved of decided utility. Its scope is, however, doubtless much wider. A very prominent lawyer of this city told me, not long since, that after trying the bromides, the valerianates, and other remedies of repute for the headaches caused by excessive mental application, he found no relief till he made use of the tincture of pulsatilla. He is now never without it, and uses no other medicine for the cure of his headaches, which I know to be very severe. No such powers are attributed to it in the books to which I have access. This is an exceptional case, it may be, but it is a valid one." The tincture of pulsatilla should be made from the fresh plant, and given with caution. The dose is from three to ten drops.—*Medical and Surgical Reporter*, March 20, 1880.

PYROGALLIC ACID IN PSORIASIS.—M. C Mook (in the service of M. Vidal) uses this remedy in the strength of one part to ten, and states that it never produces the inflammatory phenomena which so often follow the application of chrysophanic acid or oleum cadini. It does not discolour black hair, although it turns blonde hair brown, and is destitute of odour (*La France Médicale*, 1879, p. 425).—*The Practitioner*, April 1880.

SALVES OF SALICYLIC ACID IN ECZEMA.—Dr Von Geuzer recommends their use, in the strength of 4 to 100, in the moist eczemas of children and in intertrigo. Under their use the affected parts soon became dry and the skin paler and scaly (*Central. Zeit. für Kinderheilk.*, 1879, p. 323).—*The Practitioner*, April 1880.

THE ACTION OF PYROGALLIC ACID.—The acid has been employed of late at Vienna in the place of chrysophanic acid, or rather of chrysarobine, in the treatment of skin diseases (*La Presse Médicale Belge*). According to Neisler, this remedy applied externally may, under certain circumstances, become a violent poison. He used portions of it in one case of psoriasis universalis in a robust man. Half the body was rubbed with chrysarobine (in the form of alcoholic extract of rhubarb with five parts of fat), the other half with an ointment of pyrogallic acid (ten per cent.). Six hours after the application he had rigors, nausea, malaise, and semi-collapse. These symptoms, after having been relieved, reappeared forty hours later; the comatose phenomena were aggravated, the temperature considerably lowered, and death took place on the fourth day after application. During the whole time the patient passed only 1600 cc. of urine. The last urine passed, which showed in a marked degree the characters of hæmoglobinuria, was dark-brown, with a greenish reflection in the upper layers. In the sediment, which was considerable, there were not blood-globules, but only dark-coloured bodies in the form of little drops, partly amorphous, partly cylindrical. Spectroscopic examination showed the lines special to hæmogloduline near the lines E and D. Following this, experiments were made upon rabbits with chrysarobine and pyrogallic acid. Subcutaneous injections of different preparations of rhubarb, even in very strong doses, produced no noxious effects. The same experiment with pyrogallic acid was followed by toxic effects; moderate doses caused rigors, dyspnœa, and trembling in the limbs. The animals died during the first or second attack, or else came to themselves after numerous attacks which gradually diminished in intensity. The urine passed during these attacks shows clearly the characteristics of hæmoglobuline; in the kidneys the uriniferous tubules are much engorged and distended by cylinders of hæmoglobuline; the blood showed the characters given above. Under larger doses the animals invariably died; the changes in the colour of the blood and the destruction of the globules were more rapid, but no hæmoglobinuria was observed. Neisler attributes the action of pyrogallic acid on the organism to the property possessed by this acid of absorbing oxygen in the presence of alkalies, and to the decomposition which results. This action, which takes place equally outside of the organism, may be easily demonstrated. In the blood, pyrogallic acid destroys the red globules; the hæmoglobuline is dissolved in the plasma of the blood, and the residue of the globules remains suspended there in the state of stroma and fragments. The hæmoglobinuria which follows is, according to Neisler, the cause of death less because, by obstructing the uriniferous tubules, it causes anuria, which is of too short duration to cause death, than because the obstruction of the uriniferous tubules retains in the blood the pyrogallic acid, which continues to exercise its destructive action. The mode of formation of the pigmented cylinders in the uriniferous tubules is not yet elucidated. In cases of poisoning by pyrogallic acid it would be reasonable to make transfusion preceded by blood-letting, and to excite strong diuresis to favour the elimination of the renal cylinders. In any case it is certain that pyrogallic acid should not be employed in cutaneous affections spread over a large surface of the body. It may be used in affections of the head and face; in others we should accord the preference to chrysarobine. — *The Medical Press and Circular*, April 14, 1880.

TREATMENT OF ACUTE BRONCHITIS.—After a long experience Dr Bozzi states that the following receipt is very effectual in cases of acute bronchitis:—Sulphuret of antimony, 1 gram.; Dover's powder, 1 gram; Powdered sugar, 3 grams. Mix and divide into ten parts. One powder to be taken every three hours, but not more than four in the twenty-four hours. The same prescription is useful in the acute stage of acute bronchitis, as well as in the symptomatic bronchitis of heart and lung diseases. The diet should be restricted to warm and sweetened milk and to chicken broth, whilst the room temperature should not fall below 12° Réaumur (*Le Progrès Médical*, Jan. 31, 1880).—*The Practitioner*, April 1880.

TREATMENT OF INTERTRIGO IN INFANTS.—Dr Ad. Wertheimer recommends that powders should be applied to the skin only when the epidermis is sound. When there are excoriations, unguent. diachyli renders good service in recent cases. Sometimes it fails, and then corrosive sublimate, gr. j. to ℥iv., should be frequently applied (*Deutsch Archiv für Klin. Med.*, Bd. 21, Heft 3).—*The Practitioner*, April 1880.

A SUBSTITUTE FOR OIL SILK.—In the *Boston Medical Journal* for November 27, it is stated that Dr Keen, of Philadelphia, has after many trials succeeded in having fabricated by Seabury and Johnson, of New York, a paper coated with a combination of paraffin and caoutchouc. It is expected that the "waterproof paper" thus produced will supersede everything of the kind, being far superior in its qualities, and far less expensive, than oiled silk, oiled muslin, taffetta oiled silk, paraffin paper, waxed paper, and gutta-percha tissues. It is impermeable to water after an exposure of at least seventy-two hours, and even after being repeatedly crushed and crumpled in the hand; it is impermeable to air, even when bruised; it does not absorb water or discharges; it may be used with the hottest dressings that can be borne. Although very flexible, it is strong enough for all ordinary wear, especially since it will be used only once, and its cost is many times less than that of similar dressings, the price being four dollars for a roll of a hundred yards. In the Lister dressings it will prove very economical as a substitute for the Macintosh cloth.—*Medical Press and Circular*, April 7, 1880.

## PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

IN No. 1, vol. ii. of the *American Journal of Otology*, the following original communications occur, of which we purpose giving a *résumé*:—

ON THE NUMBER OF VIBRATIONS NECESSARY FOR THE RECOGNITION OF PITCH, by Professor A. E. Dolbear, Tufts College. —The smallest number of vibrations necessary to produce the sensation of a continuous sound has been variously estimated by different investigators. Savart placed it at 7 or 8 per second, Helmholtz as high as 30 per second. These estimations must be considered as purely individual ones, depending upon the capacity to perceive sounds, which is markedly different in different persons. Granting the sympathetic vibration theory of the rods of Corti, it is plain that greater sensitiveness of these rods would insure that they should retain the energy of the impulses a longer time, just as a sympathetic tuning-fork not only responds quickly, but continues to vibrate for a time after the originating impulses have ceased. A very sensitive ear might be expected to perceive a continuous sound with a smaller number of vibrations per second than a less sensitive one. The pitch of a sound may be defined as the rate of vibration per second. The absolute number per second being of no moment, a C tuning-fork making 512 vibrations in a second would give the same pitch if it vibrated for only half a second or a less fraction; but what is the least number of vibrations that will enable an ear to detect pitch? Theoretically there can be no rate, and consequently no pitch, to a single vibration. Vibrations, to be heard continuous, must follow each other with an interval not greater than the perception limit, which varies in different individuals, as mentioned above. For the average individual it will probably be not greater than the $\frac{1}{30}$ of a second, otherwise they would be heard as distinct pulses without pitch. Professor Dolbear considers it impossible to determine this low limit experimentally with the ordinary apparatus for the study of sound, such as forks, pipes, or syren, as they cannot be made to sound for so brief an interval as to make but a few vibrations. He makes the following experiment:—Let the finger-nail be drawn across a piece of ribbed paper or cloth, such as many books are now bound with, and a whistling sound will be heard, and the pitch may be readily determined. Of course, it will vary with the velocity of the hand. The number of ribs passed over in a given interval of time must give the number of vibrations; but to perceive the pitch it is necessary to touch but three or four of these, which can be determined by using a lead-pencil and a light-coloured piece of ribbed paper. The pencil records the number of ribs touched. In the experiment made the rate was at not less than 1000 per second, and consequently the whole interval was but $\frac{1}{250}$ or $\frac{1}{300}$ of a second. "I was able to touch only two at a trial, else I have no doubt they would have been sufficient to enable me to perceive the pitch; but as the difficulty seems to be purely a mechanical one there is no good reason for believing that more than two vibrations are requisite for the recognition of pitch."

A RESONANT TUNING-FORK.—Mr Thomas Alva Edison writes:—"For the purpose of rendering audible the sounds produced by tuning-forks, they are generally mounted upon resonant boxes containing a column of air, whose vibrating period is the same as that of the fork. I have devised a modification in which the box is dispensed with, the resonant chamber being formed by the prongs themselves. To make the fork, a thick bell-metal tube has one end closed, a slit is sawed through the centre of the tube nearly to the closed end. This divides the tube, and gives two vibrating prongs. To bring the prongs in unison with the column of air between them, the tube is put in a lathe and turned thinner until unison is attained, whereupon the sound is powerfully re-inforced." A useful modification of Edison's tuning-fork for the aural surgeon is suggested and described by Clarence J. Blake, M.D., who also in the following article ("A Form of Middle Ear Syringe") gives an account, with an illustration, of a middle ear syringe for the purpose of cleansing thoroughly with complete safety the cavity of the ear in cases of chronic purulent otitis media, with destruction of the membrana tympani. The syringe is so constructed that nozzles with tubes of various sizes and curvatures may be readily fitted on; and a small glass tube, fitting easily the nozzle of the syringe, and designed to contain medicated solutions for use after the parts have been freed from all foreign matter, causes the last of the solution to enter the cavities in the form of fine spray. Over the body of the rubber syringe slips a metal ring having two wings, which serve for rests for the index and middle fingers of the hand working the syringe, a very convenient and useful addition to all syringes used in the treatment of diseases of the ear.

## PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

On the Quantitative Determination of the Perception of Light in Cataract.—Trompetter (*Klinische Monatsblätter f. Augenh.*, March) believes that the usual method of determining the perception of light in cataract is not sufficiently delicate for the diagnosis of complications affecting vision in the deeper structures of the eye. According to Graefe, if a patient with mature cataract can distinguish the flame of a candle at the distance of 15 feet, the existence of any serious complication may be excluded. Two points seemed to the author to claim further attention—*Firstly*, How to express numerically, in the simplest and most accurate manner, the amount of light-perception in any case; and, *Secondly*, What degree of perception would lead one to diagnose complication. Forster's photometer was found to be the most convenient method of regulating the intensity of the light used. The smallest opening in the diaphragm, which permits of the transmission of an amount of light which the patient is just able to distinguish from darkness, is taken as the measure of the light-perception. For uncomplicated cataracts this varied from 12·5 to 32 sq. mm., being less if the eye remained for fifteen minutes previous to examination in the dark. A cataractous eye receiving no sensation of light from an aperture of 32 sq. mm. in the photometer must be looked upon as presenting some other pathological condition as well. We see no reason, however, for departing from the usual method of examination, provided due attention be paid to the state of the projection.

Myopia.—Horstmann (*Archiv f. Augenheilkunde*, vol. ix.) has drawn up a statistical report of all the cases of myopia treated at the Berlin University Ophthalmic Poliklinik during the years 1873–1878. There were 1815 cases in all, with 3581 myopic eyes. The results arrived at are shortly as follows:—The minor degrees of myopia are more frequent in the young; there is a gradual increase in the proportion between the lower and higher degrees as age advances. Far the greatest proportion of shortsighted individuals are only slightly myopic. The myopia is generally developed between the eighth and sixteenth year, and becomes stationary shortly after puberty. Myopia of a medium degree, which begins about the same time, continues progressive till the twenty-fourth to thirtieth year. The high degrees, on the other hand, are subject to periodical increase during life. The most frequent change in the myopic eye is staphyloma posticum; it is absent, as a rule, only in young individuals whose myopia is slight, although occasionally also in highly shortsighted eyes. The size of the staphyloma is subject to great variation. In the higher degrees, especially in old people, it is almost always more extensive than in the young and minor degrees. It is situated almost invariably on the temporal side of the nerve, being sometimes annular, however. Its shape is regular, except when the myopia is great, in which case the visual acuity is also generally diminished. Choroidal changes were found in 11·87 per cent., generally central. Detachment of the retina is the next most frequent complication, usually occurring after middle age, and most frequently, though not invariably, associated with the higher degrees. A form of glaucoma is found in highly myopic eyes, which only resembles the usual form in the increased tension of the globe and excavation of the papilla, and for which iridectomy is of no avail. Spasm of accommodation occurs much less frequently in myops than many seem to imagine. In no case was it found to produce an axial elongation, as Dobrowolsky supposed. Muscular asthenopia is occasionally found in young individuals whose myopia is not excessive, more frequently in aniso- than isometropia. Divergent strabismus is generally dependent on myopia, is seldom developed before the tenth year, and most frequently met with when the myopia is considerable. The squinting eye is, as a rule, amblyopic, or more myopic than the other. Strabismus convergens is occasionally associated with myopia. These results seem to agree on the whole with those of Donders.

A PECULIAR FORM OF AMBLYOPIA.—Occasionally the vision of patients who come complaining of seeing indistinctly is found to be of normal acuteness. It is, however, usually possible to find some cause for this indistinctness, a defect in the field or a diminution of the sense of colour, detracting from the brightness of coloured objects, in commencing atrophy, or diplopia of which the patient is unconscious, or, it may be, the entoptic image of some intra-ocular haze. A case which forms the subject of a paper by Krenchel (*Klinische Monatsblätter f. Augenh.*, Feb.) is interesting as showing another possible cause of amblyopia of this nature. The patient, a seaman, aged 33, had yellow fever in South America, during which he became blind. He slowly regained his sight, and when seen by Krenchel had $V = \frac{20}{20}$; field of vision slightly contracted (concentrically); colour sense normal; no definite atrophic appearance of the disc, but the vessels probably somewhat smaller than normal. Although able to read the finest print, he declared that objects appeared to him to be enveloped in such a dense mist that he hardly dared venture out in the street alone, even in broad daylight. Krenchel was at first inclined to disbelieve his statements; but after having been under observation for some time it became evident that he was really the subject of some obscure defect of vision. He was then tested with Masson's disc in order to determine his power of distinguishing between different degrees of intensity of light. The disc used produced on rotation 7 rings (gray on white ground), the most distinct of which, compared with the background, corresponded to a difference in intensity of $\frac{1}{15}$, the least distinct to only $\frac{1}{120}$. All these rings could be seen by an individual with normal sight. The patient, however, was unable to see any one of them, and by means of a movable black sector on a white ground it was found that the least difference in intensity of which he was conscious was $\frac{1}{10}$. This, then, offered an explanation for the difficulty which he experienced in going about alone, as outward objects not differing greatly in intensity would lose their individuality for him, and appear more or less as they do in a faded photograph. The patient disappeared after some weeks in much the same condition, having received little or no benefit from the usual remedies for amblyopia. Krenchel has been unable to detect this curious anomaly in other forms of amblyopia, partly, as he believes, owing to the fact that there is in such cases, as a rule, a diminution of the form sense.

## NURSES AND DOCTORS.

### SYSTEMS OF NURSING, BY A NURSE.

WE hear a great deal about systems; it seems there was or is an old system, and that there is or will be *a* new system. Under the former, it is said, all was bad; under the latter, we shall behold perfection. Perhaps the only thing to be said, logically, to those who promise us perfection is, Show us such results, and we will not question your methods. But for the "present crisis" that short answer will not suffice. A new probationer has made herself the mouthpiece of what she terms *the* new system; and old soldiers of the cause, aghast at the vehemence of this young recruit, feel themselves compelled in justice to give some account of the matter from their own point of view.

The objectionable points of the old system were, the want of decent conditions, hours of work, food, accommodation, pay; the imposition of scrubbing and other heavy work, such as carrying corpses to the mortuary; the want of systematic training, and the absence of proper supervision. The hours in many hospitals were, for the day nurses, from seven in the morning to eleven at night; and for the night nurses, from eleven at night to five the next afternoon; and each got out once a fortnight. The day nurses usually had a decent bedroom, but the night nurses were herded together in dormitories, unfurnished save with beds, and exposed to all the evils of want of privacy. The small allowance of food was given them usually uncooked; it was prepared without any accessories, and eaten at the ward fire or in the scullery. The night nurses did duty as scrubbers also—weary wights they were. What with long hours, sore drudgery, comfortless surroundings, what wonder if they fell asleep at their post or resorted to drink for consolation?

The staff had no female supervision. The matron's duties lay with the housekeeping. If she was a kindly woman, she could do much to help and comfort them privately, but her time was fully occupied with her own work; she did not understand theirs, and she had no power to alter the hard conditions we have detailed.

It will surprise no one that under such a system it was mainly shiftless people who could not do better for themselves, or clever people hindered by some flaw of character, who sought employment in hospitals, and, once in, the influences did not tend to raise them. It will surprise many to hear what is as certainly true, that, notwithstanding all these horrors and hardships, some of the nurses were of the best type of woman—clever, dutiful, cheerful, and kind, endowed, above all, with that motherliness of nature which is the most precious attribute of a nurse. To preserve such a character amid such surroundings surely shows a clear, steady glow of inward brightness. Let no one forget these dear examples.

The office of a new system is to make proper conditions for the nurses—conditions which will attract well-brought up women, and enable them to give their best service to the sick poor at a less price than utter exhaustion to themselves. Methods will vary much, but some principles will be common to all. First, the work itself must not include rough and heavy cleaning. Nurses are severely tried, in muscle and in every sense, by their own manual work for their patients; while their intelligence, observation, judgment, and temper are under a continuous strain. Let them, at least, be free for all that. Wet hands and a dirty apron do not aid in the comfort of a restless and suffering patient.

Next, the hours must be moderated, and allow not only due time for rest, but frequent opportunities of change of air and scene. Home comforts should be provided, in food, general rooms, and times of meeting with each other and with those in charge of them. They must be taught their duties thoroughly, going from ward to ward for this purpose, as pupils, before being entrusted with a charge. After that there is no object in moving them about; it is purely a disturbance. And they must have a superintendent who has practical knowledge of their work.

Is there anything in these changes to invite the hostility of the medical staff? And are the changes in themselves sufficient to produce a perfect nursing staff? I think we may conclude that the doctors will approve of the conditions, but we have to own that the conditions do not work miracles. The prime difficulty, under the best conditions even, is to procure enough of good women for the appointments. Plenty of educated women offer themselves, plenty of clever women, plenty who are weak and kindly, but not many who have all the qualities we are agreed are necessary to make a first-class nurse. The limits are still straiter if the superintendent who selects the women for training lacks judgment, or if, in managing them, she fails in temper. While the world is what it is, it will always be uphill work to keep a large staff well supplied with suitable and well-trained women. This, and not opposition from the doctors, is the real difficulty. The young recruit with whom we started makes appalling charges against the medical staff, that they love the old style for its licence to coarseness, and because before ignorant nurses they were more at liberty to make experiments. The writer of this, a pupil of Miss Nightingale, has had to do for the last twelve years with two of the largest hospitals nursed under the ideas of that Chief of nurses. She finds that doctors will not tolerate interference with their province, and do not appreciate education and smartness if unaccompanied with loyalty and real nursing power; that they welcome and prize highly all who have the proper gifts—the more refined and intelligent the better; that they help most generously, often at a great sacrifice of their valuable time, and entirely without reward, in the teaching and training of the nurses; that their conduct to them is full of courtesy and consideration, and that they lose no opportunity of showing them kindness. In the public life of an hospital a woman will meet with many and keen trials, but she has generally in her own conduct and tone a sufficient safeguard from insult; and as to little annoyances arising from want of refinement or perception, a woman is certainly wanting in herself who cannot soon win round patients and students and doctors to gracious and delicate ways. This must be done by individual influence in the individual case, not by rule or controversy. The experience of the present writer goes also dead against the other charge. She has found doctors, young and old, from residents to seniors and professors, delighted to explain to an intelligent and modest nurse the principles of their treatment, and the reason for particular remedies. And she shares with many the pain caused by the wanton charges brought by a young member of her profession against a body to whom nurses owe so very much, and without whose cordial co-operation they could do nothing in hospitals for the service of the sick poor.

## EDINBURGH INFIRMARY NURSING, BY ONE OF THE STAFF.

Four years ago[1] there appeared in our pages an article on the subject of Nursing in the Edinburgh Royal Infirmary, which discussed the old and the new system, and gave a brief account of the arrangements for teaching, training, and housing the nurses.

So far as Edinburgh is concerned, the new and splendid Infirmary, with its admirable arrangements for the comfort, almost the luxury, of all its inmates, has greatly aided the growth and progress of the new system; and the past four years have seen difficulties removed, friction lessened, a gradual improvement in the knowledge and wisdom of the teaching and training staff, and the perfecting of a very complete body of staff nurses, assistant nurses, night nurses, probationers, and ward assistants. The improvement in the dormitories and day-rooms, the general brightness and cheerfulness of the place, have made it an easier matter for those who wish to follow the profession of nursing to get the leave of their parents and guardians to do so, and has improved the health of the inmates. The teaching by certain members of the medical and surgical staff, and the far more systematic and careful instructions by the assistant superintendents, under the direction of the lady superintendent, have both been increased in amount, systematized, and borne good fruit.

It may now be said with perfect truth, not only that the New Edinburgh Royal Infirmary has got a nursing staff of very high character and attainment, but that it has within its own walls the inducements which procure, and the means of training, nurses for its own use, for the benefit of the public, and even for work in other hospitals. The nurses' homes and societies for the training of sick nurses need no longer send their probationers out of Scotland for their hospital training. The Edinburgh Royal Infirmary annually trains six nurses for one society, and has during the last twelve months supplied five matrons for other hospitals, besides many nurses for both hospitals and private work.

The great primary object of an hospital being the care and cure of the sick and injured poor, the improvement in the nursing has helped in the great work, not only by lessening the death rate, but by increasing the comfort of each patient. Much may be said about antiseptic and septic wards, modes of dressing, modes of operating, as modifying mortality in the surgical house. Really good devoted nursing has its own power, and is a most appreciable, though often an utterly forgotten, factor in the sum. And for the comfort of the patients, no one who does not know can tell the difference. Twenty years ago, did we know a nurse to be coarse and harsh, all we could say was, she might be worse, she might drink, or be a fool, we could not replace her. Now we can; and year by year the standard, not only of conduct, but even of courtesy, is being raised.

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[1] *Edinburgh Medical Journal*, August 1876, p. 929.

But it may be asked, Is all so smooth? do we not hear elsewhere of friction between medical and surgical staff on the one hand, and nursing sisterhoods on the other? Do we not read articles by pert probationers, exhibiting both lamentable ignorance and concomitant conceit? How have you—or have you not—escaped this conflict of opinions?

No doubt difficulties have arisen. No doctor, especially no surgeon, likes to change his head nurse; and frequent changes seem to have been the rule, not the exception, in other hospitals where friction has been felt. Here, once she is trained and appointed a staff nurse, unless she is promoted to a matronship elsewhere, the head nurse is never changed, and thus can learn the ways and special methods of her chief. Probationers must, for teaching purposes, go the round of the various wards, medical, surgical, and special. Gradual changes, mutual forbearance when difficulties appeared, have been the very simple principles. In a word, the medical staff wish to help the lady superintendent to train her nurses, and the lady superintendent sees that the real object of the nursing staff is to help the physicians and surgeons to cure the sick poor;—not to wear any particular raiment, however becoming; not even to pin up coverlids in any particular way, however inscrutable; not to talk of a vocation, but to live one.

# Part Fifth.

## MEDICAL NEWS.

Minto House Medical School.—At a meeting of the lecturers of this school, held recently, Mr Geddes was unanimously elected to the vacant Lectureship on Natural History. Mr Geddes was formerly demonstrator of physiology in University College, London, and, more recently, of zoology in the University of Aberdeen. We understand that he has just returned from a zoological and palaeontological expedition in Mexico, and that he has had considerable experience at the French, German, and Scottish zoological stations.

Edinburgh Royal Maternity and Simpson Memorial Hospital.—The medical board of this hospital have appointed Russell E. Wood, M.B. and C.M. Edinburgh, and Herbert Coupland Taylor, M.B. and C.M. Edinburgh, house surgeons for the quarter commencing 1st proximo, in place of J. Milner Helme, M.B. and C.M. and M.D., and Stanley M. Rendall, M.B. and C.M. and M.R.C.S.L., whose term of office then expires. The physician on duty for the present quarter is Dr Angus Macdonald, who will be succeeded on 1st proximo by Dr Keiller.

## CORRESPONDENCE.

*To the Editor of the Edinburgh Medical Journal.*

SIR,—In the debate on my paper on "A Death during the Administration of Chloroform," several of those present intimated a desire to know whether the artificial respiration by Sylvester's method had been fully and efficiently performed. I am enabled to state that it was, *very thoroughly.* So much have I been impressed with the necessity of an intelligent understanding of the process, that a few nights before this case I lectured to my clerks and dressers on the rationale of the method, giving them a practical illustration at the same time, bringing the arms as far back as I could possibly get them during the inspiratory, and throwing my whole weight on to the chest during the expiratory portion. I reaped the benefit of this in my patient's case, the gentleman who alternated with me performing the movements as well as any one I have ever seen. I may mention that, having occasion to raise the legs, I found that the respiration was thereby much aided, the compression of the chest being much more effectual, and I should advise this being tried in any future case.—I am, Sir, yours, etc.

GEO. B. SILKE, M.B. and C.M., House Surgeon.

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8 BLYTHSWOOD SQUARE, GLASGOW, 12*th April* 1880.

DEAR SIR, — In the last number of the *Edinburgh Medical Journal* you have a review of M. Peters's recent investigations with regard to the difference of temperature in the affected side in phthisis. Perhaps your reviewer is not aware that four years ago, in an article to the *Lancet* on the use of the hypophosphites in phthisis, I mentioned this fact, and since then I have been conducting a series of experiments in the Royal Infirmary with a view to still further testing it. I find, as a result of these, that there is a difference of a degree in pleurisy and pneumonia; in phthisis, on an average, half a degree. This only applies to the early stage of phthisis, and when the one lung is alone involved. When both are affected the variations cease as being trustworthy. I think it right to draw your attention to this, and not to allow foreigners to claim the credit for everything. You will see proof of what I now write in the *Lancet* for May 13th, 1876, and July 29th, 1876. M. Peters writes as discovering it in 1878.—Believe me, sincerely yours,

M. CHARTERIS.

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MILAN, 20*th February* 1880.

HONOURABLE COLLEAGUE,—The Ophthalmological Section of the International Medical Congress held last year in Amsterdam expressed unanimously their wish that the International Ophthalmological Congress of 1880 should meet in Italy; and through Professor Snellen, president of the committee, charged the undersigned to select the city and fix the time for their future meeting. The writer willingly accepted the duty, and chose Milan as the seat of the Congress that will take place during the first four days of next September. Consequently he begs of you, respected sir, before the middle of June, to favour him with your written adhesion. In a second circular the places will be announced where names should be inscribed, and where the meetings will be held. The committee will leave nothing undone to ensure to its honourable colleagues a suitable reception, with cordial and brotherly hospitality.—With the greatest consideration, the President, Prof. A. QUAGLINO.

## OBITUARY.

### GEORGE DALLAS BAIRD, F.R.C.S. EDIN.

BY the death of Mr Baird, which took place on the 17th February last, the head of the profession has passed away from Linlithgowshire, and one of the connecting links between the past and present generations of medical practitioners has been severed.

Born at Linlithgow in June 1806, George Dallas Baird was the son of the late Mr Thomas Baird, formerly surgeon in the Honourable East India Company's service, and latterly engaged in practice at Linlithgow, and nephew of the late George Husband Baird, D.D., Principal of the University of Edinburgh. Having received his earlier education at the Burgh School of Linlithgow, he proceeded to the University of Edinburgh, where he was enrolled an *alumnus* at the early age of fourteen. Before entering upon his medical studies proper, he attended courses in Greek, Latin, Logic, and Mathematics. His professional teachers included the names of Monro, Home, and Hope; and before taking his qualification he attended courses on Practical Anatomy and Demonstrations by the late Mr Syme; and on the Principles, Practice, and Operations of Surgery by his friend the late Mr Liston, also a native of West Lothian.

Having passed the examination of the Royal College of Surgeons in 1825, he returned to Linlithgow to assist his father, intending subsequently to go up for graduation; but his father having died in the same year, he found himself, at the age of nineteen, called upon to undertake the care and responsibility of one of the largest practices in West Lothian. For upwards of fifty years (forty of them without any assistance) his name was closely associated with the medical history of Linlithgow and its neighbourhood. Night and day, in all weathers and during all seasons, his whole time and strength, his talents and skill, were freely given to his patients; and when wanted he was never absent from his post. Most of his country visits were made on horseback; for when he began practice conveyances were but little used, and for many years afterwards he spent more hours of the twenty-four in the saddle than in the rest and comfort of his own house. Finding himself unequal to the many calls upon his time and skill, about thirteen years ago he obtained assistance, that the more onerous duties he had so long and faithfully discharged single-handed might be shared and lightened; but the well-earned leisure was sought too late. Exposure to the inclemency of a climate like ours for half a century, with broken rest and a conscientious anxiety for the wellbeing of his patients, slowly, but certainly, began to tell on a constitution naturally vigorous, and six years ago slight paralytic seizures excited the first anxiety of his friends. Following on these came cardiac and other complications, for the alleviation of which the advice of several professional friends was obtained; but his vital energy was gone, and he gradually sank from exhaustion on the date mentioned at the commencement of this notice.

How many revolutions in medical science and practice must Mr Baird have witnessed, and how many remedies, each in its turn new, must he have seen relegated, with the lancet, to oblivion, during these five decades! In the early years of his practice it was the fashion to bleed every person suffering from acute inflammatory diseases; when he retired from it, he had made himself acquainted with their natural history and course, and regulated his treatment in accordance with that knowledge.

About the time Mr Baird commenced practice, Lænnec's discovery of the stethoscope as a means of diagnosis in thoracic diseases was on its trial, and one of the uncouth cylindrical instruments of the time was procured. On applying it to the chest of one of his patients suffering from chronic bronchitis, and hearing various wheezing, snoring, and other discordant noises transmitted to his ear, he gave his patient up for lost, and pronounced him a doomed man! That not very much confidence was placed in the new instrument, even by eminent practitioners of this period, may be inferred from the statement that, in a consultation with Dr Abercrombie, Mr Baird and he could only come to a satisfactory diagnosis between pleurisy, pneumonia, and bronchitis, by considering whether or not the blood was buffed and cupped. And yet, in after years, no man was more careful or minute in his explorations of the lungs and heart with this instrument, having gradually educated his ear to its correct and discriminating employment.

Mr Baird took pains to keep himself abreast with the latest advances in our art, and with that view diligently read the most recent medical publications, and provided himself with the more modern instruments. By his medical brethren in West Lothian and the eastern part of Stirlingshire his opinion was frequently sought in consultation, being valued both for the sound and careful views he took of the case under consideration, and for the high sense of professional honour he always entertained towards his fellow-practitioners. None of the ripe experience obtained in such wide practice and over such an extended period ever found its way into any of the medical journals, and this was because Mr Baird was the most modest of men. Retiring almost to a fault, his own well-reasoned and matured opinions were never obtruded; but those of his contemporaries who may now survive him, and who may have met him professionally, will bear ample testimony to his careful diagnosis, skilful treatment, and intelligent management of his cases. Poor and rich received equal attention at his hands; and by the former, perhaps, he will be grieved the more because they could give him only their gratitude in return.

To the Edinburgh Royal Infirmary and University Mr Baird was a regular contributor, and in his native town every praiseworthy scheme received at his hands liberal support. The community amongst whom he lived and laboured will long mourn him, and to many his loss will be irreparable. His life was a noble and self-sacrificing one, and he gave it freely to his patients. To them he was more even than the trusted family physician; in many cases he was the revered friend as well. He died as he had lived, beloved by not a few, regretted and respected by all.

## PUBLICATIONS RECEIVED.

Henry Ashby, M.D.,—Notes on Physiology. Longmans, Green, & Co., London, 1880.

J. S. Bristowe, M.D,—Physiological and Pathological Relations of the Voice and Speech. David Bogue, London, 1880.

F. J. Bumstead, M.D., LL.D.,—Pathology and Treatment of Venereal Diseases. H. C. Lea, Philadelphia, 1879.

Cenni Statistici sul pio istituto di S. Spirito in Sassia dal 1870 al 1876. Cenniniana, Roma, 1880.

Eighth Annual Report of the Local Government Board, 1878–1879.

George H. Fox, A.M., M.D.,—Photographic Illustrations of Skin Diseases. Parts 5–8. E. B. Treat, New York, 1880.

John Hilton, F.R.S., F.R.C.S.,—Rest and Pain. George Bell and Sons, Lond., 1880.

E. Klein, M.D., and E. Noble Smith, L.R.C.P.,—Atlas of Histology. Part II. Smith, Elder, & Co., London, 1880.

J. Kraus, M.D.,—Carlsbad and its Natural Healing Agents. Trübner & Co., Lond., 1880.

George Lawson, F.R.C.S.,—Diseases and Injuries of the Eye. Henry Renshaw, London, 1880.

J. Wickham Legg,—On the Bile, Jaundice, and Bilious Diseases. H. K. Lewis, London, 1880.

John C. Lucas, F.R.C.S.—The Elements of Indian Hygiene. J. & A. Churchill, London, 1880.

A. P. Luff, F.I.C., F.C.S., F.L.S.,—Introduction to the Study of Chemistry. J. &. A. Churchill, London, 1880.

Metric Record of Prescription and of Medical Observation. H. K. Lewis, Lond., 1880.

Montreal General Hospital Reports. Vol. I. Dawson Brothers, Montreal, 1880.

Dr Albert Peillon,—Cancroide des Lèvres et de son traitement. J. B. Baillière et Fils, Paris, 1880.

A. R. Simpson, M.D.,—Contributions to Obstetrics and Gynecology. Adam and Charles Black, Edinburgh, 1880.

W. P. Swain, F.R.C.S.,—Surgical Emergencies. J. & A. Churchill, Lond., 1880.

John C. Thorowgood, M.D.,—Consumption, and its Treatment by the Hypophosphites. Baillière, Tindall, & Cox, London, 1880.

Transactions of the College of Physicians of Philadelphia, Vol. IV.

G. Wilson, M.A., M.D.,—Healthy Life and Healthy Dwellings. J. & A. Churchill, London, 1880.

# Part First.

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## ORIGINAL COMMUNICATIONS.

### ARTICLE I.—*On Diastases in the Bones of the Lower Extremities of the Fœtus, produced by the Accoucheur.* By ALEXANDER RUSSELL SIMPSON, M.D., F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University of Edinburgh.

(*Communicated to the Obstetrical Society of Edinburgh on 28th Feb.* 1880.)

IN relating a case of primiparal placenta prævia[1] to the Society a year ago, I thought it worthy of record, with regard to the infant, "that the day after its birth its left leg was found to be greatly swollen; there were abrasions of the skin above the malleoli, and the limb hung stiffly from the pelvis." I said "I was satisfied that there was no injury in bone or joint; but I believe that laceration of some of the structures in the upper third of the thigh had taken place. The swelling was there very great, so that the skin became quite tense, and it looked blue, as from ecchymosis underneath. For a week the limb remained swollen and straight, but the swelling gradually subsided. The muscular power of the limb was restored, and now the infant, which is thriving on the milk of a wet nurse, moves the legs as naturally as if no damage had ever been sustained."

I added (p. 81) that "it was new to me to observe the lacerations of the muscles and vessels that had obviously taken place. But then," I said, "the infants brought into the world under similar circumstances are most frequently dead. Hence, though such injuries may have been inflicted on them, we have no vital reaction to betray the mischief."

I am not now so satisfied as I then was that the injuries were confined to the soft structures of the thigh and leg, for since then I have had the opportunity of examining the limb of a child extracted under somewhat similar circumstances by the same method. Only, it was a case of multiparal placenta prævia. It was the right leg that was seized and brought down; and the child was dead before it was fully delivered.

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[1] See my *Contributions to Obstetrics and Gynæcology*, p. 76. Edinburgh, 1880.

In this instance the limb presented nothing special in its external appearance beyond a slight abrasion over the internal malleolus. There was no swelling or distortion of the limb; and except that the foot seemed somewhat more loosely jointed to the leg, as if some of the ligaments had been torn, it might have been thought that no injury had been sustained. Certainly there was no deformity that the eye could detect, or crepitations that the finger could feel.

Yet at three different points fractures were found on dissection. They were all fractures of the kind known to surgeons as "diastases,"—the shaft of the bone, that is to say, had become detached from the epiphysis.

The seats of the diastases in the right leg are, 1st, the upper end of the femur below the trochanters (see Fig. 1); 2d, the lower end of the tibia; and 3d, the lower end of the fibula (see Fig. 2).

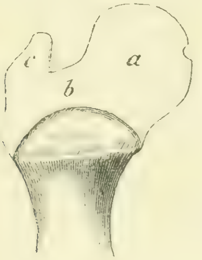

Fig. 1.—Coronal section through the upper femoral epiphysis, carried through the lig. teres and troch. major. *a*, Head, *b*, neck of thigh-bone; *c*, trochanter major. (Kuestner.)

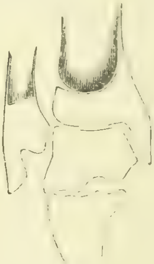

Fig. 2.—Coronal section through the lower epiphysis of the tibia and fibula at the ankle-joint. (Kuestner.)

There has also been some separation of the epiphysis of the lower end of the femur of the same (right) leg, for the epiphysis is slightly movable on the diaphysis; but the upper ends of the tibia and fibula are quite firm.

In the *left leg* the epiphysis of the lower end of the tibia is loosened, but the epiphysis at both ends of the femur are firm.

In our text-books and systems of midwifery little or no notice seems to be taken of the possibility of the occurrence of such fractures. For although cases of fracture of the shaft of the femur are mentioned by Smellie,[1] yet the whole subject of fracture of the bones of the extremities, especially of the lower extremities, of the fœtus has been almost entirely overlooked in British obstetrical literature.

In the interesting article on Fractures of the Fœtus, by Delore, in the French Dictionary of the Medical Sciences,[1] injuries of the tibia and fibula are not noticed; and the fractures of the femur, which are fully treated of as to their mechanism, seat, prognosis, and treatment, are the usual fractures in the shaft, such as Smellie had described. Bailly[2] says, in a single sentence, "One sometimes involuntarily detaches the epiphysis of the femur and the tibia in the tractions one makes on the lower extremities during pelvic version or in delivery by the breech." But the most important contributions to the subject with which I am acquainted are, a paper by Dr Carl Ruge,[3] who has demonstrated the unsuspected frequency with which injuries of the fœtus are produced during delivery, and the extraordinary variety in their character, and an essay by Dr Otto Kuestner,[4] who gives the bibliography of the subject very fully, and follows up Ruge's observations with a series of experiments made with the view of determining the kind and amount of force required to produce the different varieties of injury of the bones.

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[1] Smellie's *Midwifery*, edited by M'Clintock, vol. iii. p. 298: Sydenham Society.

Speaking of the injuries of the femur, Kuestner[5] says, "As regards the recorded cases of epiphysis-separation, Henke, indeed, notes the possibility that 'the upper cartilaginous apophysis may be detached from the femur by strong traction on the foot;' but he records no case. Thudichum (*Illust. Med. Zeitung*, 1855) knows a case of separation of the upper epiphysis (Bertrandi); Ruge has none; to myself also no case is known. Yet my experiments show that hyperabduction of the leg is very likely to produce this kind of injury; the leg may get into this situation during version, perhaps also during extraction."

His experiments show that in the lower extremities the epiphyses that yield most easily under a strain are those at the lower end of the tibia and fibula. In one experiment the application of a weight of ten kilograms for two minutes produced a diastasis of these bones, with laceration of the periosteum. The weight having been kept on for four minutes, there was found besides to be great loosening of the upper tibial epiphysis, and rather less in the upper fibular epiphysis. The lower epiphysis of the femur was only slightly movable, the upper quite firm. He quotes an experiment of Pajot, who found the upper epiphysis of the femur intact after a strain of 63 kilograms had been applied; found in his own experiments that a weight of 32 kilograms left it unaffected, and doubts whether it can be injured under simple traction in a full-time fœtus. He finds, however, that this epiphysis very easily gives way from within outwards when the thigh is placed at right angles to the trunk and then moved strongly outwards. In the turning of the child in which I demonstrate the injuries to-night, it is just possible that traction may have been made on the limb when it was in this position; it would not, however, have occurred to me to suppose so but for this observation of Kuestner.

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[1] *Dictionnaire Encyclopédique des Sciences Médicales*, iv. 201 : 1879.

[2] *Nouveau Dictionnaire de Médecine et de Chirurgie Pratique*, xv. 33 : 1872.

[3] *Zeitschrift für Geburtshülfe und Frauenkrankheiten*, p. 86. Berlin, 1876.

[4] *Die Typischen Verletzungen des Extremitaetknochen des Kindes durch den Geburtshelfer.* Halle, 1877.

[5] P. 45.

*Diagnosis.*—The accoucheur should examine the limb of every child on which he has made traction in the operation of version. This will be all the more necessary where there has been difficulty in the extraction and any degree of pulling force has been employed. On thinking back over my own practice, I fancy such fractures as I have been describing must have taken place in one or two cases where I was aware of a kind of "chuck"—sound or sensation, I can hardly tell which. At the time I did not think more of it, as the children were dead, but supposed that some ligaments were torn. Such an observation now would lead me to suspect a diastasis in some of the long bones subjected to traction. When the separation between apophysis and diaphysis is complete, and attended by laceration of the periosteum all around, the hiatus will be easily traceable, and crepitation may be felt. Where there is simply loosening of the epiphysis the diagnosis will be more difficult, as crepitation may not be perceptible. The injury need never be confounded with dislocation, if Hofmokl[1] be correct in averring that attempts to produce dislocations in fœtal cadavera at hip, elbow, and shoulder joints always fail, and end only in epiphysial separations.

*Prognosis and Treatment.*—Where the periosteum has been lacerated, it will be necessary to bandage the limb to keep the separated portions of bone in apposition. Otherwise the healing will take place under the natural processes. Only it would always be desirable to make sure that the limb is not subjected to any strain or sudden movements, and, as Kuestner suggests, it may be proper to watch such cases to see whether any ultimate influence be exerted on the growth of the injured bone.

## ARTICLE II.—*Three Cases of Parametritis, with Observations on its Diagnosis and Treatment.* By ANGUS MACDONALD, M.D., Lecturer on Midwifery and Diseases of Women and Children in the Medical School; Physician and Clinical Lecturer on Diseases of Women, Royal Infirmary, Edinburgh.

(*Read before the Edinburgh Obstetrical Society, 14th April* 1880.)

So much importance attaches to the diagnosis, prognosis, and treatment of parametritis, that we are, I think, justified in recording from time to time cases of special interest belonging to that category. This must be regarded as my apology for laying the records of the following three cases before the Fellows of this Society.

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[1] Oesterreich *Med. Jahrb.*, heft iii. s. 351. See Canstatt's *Jahresbericht*, 1877, ii. 633.

It is well known that this affection, though now a well-recognised and common one, not unfrequently gives rise to no little anxiety even to the experienced gynæcologist, and is the source of much difficulty and concern to those members of our profession who are engaged with the cares and burdens of general practice, and have only imperfect opportunity to watch the progress of such cases.

It is for the advantage of the latter class particularly that the cases are recorded. I am the more disposed to report them because they severally contain certain points of special interest. The records of the general run of such cases is sufficiently dull to exclude them from report, except in the form of statistical lists; and it is only such as have some little peculiarity in their nature or treatment that deserve a place in the Transactions of a Society such as ours.

If the reading of the following cases succeed in stimulating an interesting and useful discussion of the subject, my action in contributing them will have been sufficiently justified.

The cases I am about to report are very different in character, in duration, and treatment. They all agree, however, in being examples of inflammatory mischief situated in the connective tissue that surrounds the uterus, or lies between, and gives support to, the various pelvic viscera. With these preliminary remarks I proceed to record the cases.

Case I.—A. M., from Lochee, aged 31, admitted to Ward xvi., June 24, 1878, stated that she had been married, had had five children and one miscarriage. She complained of gradually increasing debility, with loss of appetite and leucorrhœa, which had existed for two years, and also of suppression of menses for the last three months. Her husband died two years ago, shortly after which she was confined to bed for three months from pain in the lower part of the abdomen, and treated by an American medical man, who used, among other measures, a Hodge's pessary. Thereupon a hard, resistent body, as large as a hen's egg, formed, and could be felt by external manipulation. On examination after admission the patient was seen to be rather thin, but all organs except the pelvic were normal. Examination per vaginam detected behind the uterus a large, unyielding mass, closely soldered to the uterus, and somewhat tender on pressure. The uterus itself was observed to be displaced upwards and forwards by the pressure of the mass, and squeezed against the arch of the pubes. The cervix was healthy, but deeply divided transversely in its vaginal portion. The sound passed fully 2½ inches into the uterine cavity, in a direction upwards and forwards. The uterus was completely fixed by the mass, which was smooth in outline, tender, and resistent. Per rectum the mass could be felt, forming a firm, resistent arch closely applied to the anterior wall of the bowel.

The urine was examined and found normal. A week after admission the patient had a rigor, with slight elevation of temperature, and on examination it was found that the tumour had increased in size and pressed the uterus more downwards as well as forwards. No trace of softening at any part of it could be detected. A week later the tumour came to project so far down in the posterior cul-de-sac of the vagina as to reach close to the perineum, the uterus meanwhile being pressed more and more tightly against the posterior aspect of the pubic arch. The upper border of the pelvic swelling could be distinctly traced, on the left side reaching barely to the level of the ileo-pectineal line, but on the right extending upwards and outwards so as to occupy part of the false pelvis.

On 17th July an obscure feeling of fluidity was felt on double manipulation (abdomino - vaginal), and suppuration was accordingly suspected. An exploratory trocar was introduced per vaginam into the swelling at a point to the right and somewhat posterior to the cervix uteri. About a tablespoonful of stinking pus escaped through the canula. The latter was then withdrawn, a straight bistoury introduced, and a free opening made for the escape of the discharge. Although at the same time pressure was made upon the swelling outside, very little pus escaped after the knife was removed. The temperature rose in the evening to 102°, and next day the patient retched a good deal, but there was no abdominal distention and no tenderness. Poultices were applied to the abdomen, and a quinine and iron mixture ordered.

On 20th July the ward record states that the inflammatory swelling has diminished in size considerably, and that a purulent discharge is going on from the opening, unaccompanied by any pain. In the evening of that day, however, the patient became sick and vomited, and the temperature rose to 103°·2, her pulse to 104. There was also considerable diarrhœa. To arrest this she was next day ordered tinct. of rhubarb and Battley's solution of opium. To have iced brandy and water with milk.

On 22d July the abscess cavity was again punctured by a trocar, and the opening subsequently enlarged by a bistoury, when about $1\frac{1}{2}$ ounce of pus was removed. The interior of the abscess was washed out with carbolic acid solution 1–100, and a drainage-tube inserted to maintain free discharge and lessen tension. The pus was extremely putrid, and contained many round bacteria. The patient's condition improved greatly, while a profuse discharge of fœtid pus continued to flow from the vagina notwithstanding frequent disinfection of the abscess cavity with carbolic lotion, the strength of which was gradually increased to 1 in 20. The urine was from time to time examined, and found of dark colour, with a faint trace of albumen. It deposited, on standing, only a small amount of mucus and pus.

Up till 4th August the patient continued to improve, the syringing being repeated every other day, and the discharge continuing tolerably free, but fœtid. But on the evening of that day a feeling of coldness came over her, and her temperature rose considerably. Her breath assumed at the same time the characteristic new-mown hay odour; there were clammy sweats, and, in short, the usual symptoms of septic infection. Accordingly, at visit on the following day, the patient was put under chloroform, the opening much enlarged towards the left and posteriorly by a bistoury, and the cavity entered and freely explored by the finger. The abscess was found to pass behind and to either side of the uterus to an extent farther than it was possible to reach by the examining finger. The fœtor of its contents was simply abominable. Its cavity was now thoroughly washed out with carbolic acid solution, and a large drainage-tube inserted. That evening the temperature rose to 104°, and considerable vomiting occurred, but next day the patient was found much better, with a normal temperature and nearly normal pulse. The drainage-tube had dropped out in the course of the night, but the discharge had manifestly free vent, so that it was not replaced.

From that time the patient progressed slowly but steadily towards recovery, the opening remained patulous, and the discharge continued in considerable amount, gradually, however, losing its fœtor. The swelling contracted, and the uterus had nearly regained its normal position in the pelvis when the patient was discharged, 17th October, to the Convalescent House. After a short residence there she returned to Dundee in good health, there being no trace of the previous extensive inflammatory swelling except some fulness fixing the uterus posteriorly to the back wall of the pelvis, near the junction of the body and cervix.

This case seems to me to be important in several particulars. It will be noted that the disease appears to have originated in the irritation excited by an ill-fitting Hodge's pessary. Whether or not there had existed a retroversion at the time the pessary was introduced warranting its employment, it was impossible to decide after we saw the patient, as the bulk of the retrouterine swelling had by that time placed the uterus in a position of extreme anteversion.

The case is, however, one among many evidences that could be produced, from a careful record of suitable cases, of the possible dangers that follow in the wake of the application of even such a harmless and useful instrument as a Hodge's pessary when due care is not taken to prepare the parts for the pessary, and to make sure that the instrument is accurately adapted to its situation.

I am far from objecting to the use of a Hodge's pessary in cases of retroversion. On the contrary, I know they are often the source of unspeakable comfort and advantage to sufferers from this lesion. If I condemned its use I would be untrue to myself, for I employ the instrument frequently. But to obtain advantage from the employment of such means care must be taken to make certain that any inflammatory irritation which is present may be subdued, and that the pessary is of the proper size.

There is no part of Dr Emmet's work, recently published, more valuable than that part of it in which he insists upon the necessity of carefully adapting every pessary to the shape and peculiarities of the vagina in each particular case, pointing out that undue elevation of the uterus is equally as objectionable as undue depression of the organ, and that a pessary, to perform its function properly, must be capable of retaining the uterus exactly in its natural position. I believe much unwarrantable infamy has been fastened upon pessaries that ought more justly to be laid to the charge of incapacity or carelessness on the part of the practitioner.

Before adjusting a Hodge's pessary for retroversion it is in the highest degree necessary to make certain that no inflammatory congestion or irritable condition of the body and fundus uteri is present. If such there be, this must be reduced before the pessary be applied. The methods for its reduction are various. Leeching the cervix may occasionally be needed, but that is rare. All that is ordinarily required is the use of hot-water injections night and morning, and the introduction of a plug of cotton wool steeped in glycerine each night. In the course of a week or ten days the fundus is reduced in size and the tenderness is made to disappear, so that a pessary may be safely introduced, and, unless the uterus is fixed in position by adhesions so as to be irreplaceable, will be well borne, and will prove a very great advantage. Extreme care must be taken always that the uterus is thoroughly replaced, and that the posterior limb of the instrument does not press unduly upon the fundus or project into the bend of a retroflexed uterus. If the uterus cannot be completely replaced it is, I think, better to use a Galante's flexible ring pessary than a rigid instrument such as Hodge's. No doubt the uterus is not so well kept in position, but a certain amount of relief is afforded, as the pain resulting from dragging of the uterus upon its pelvic attachments is greatly obviated.

We are next led to make some remarks upon the diagnosis of this class of case. It is allowed on all hands that it is difficult to make a differential diagnosis between parametritis and perimetritis, and that it is often impossible to separate oöphoritis from either lesion, whilst retrouterine hæmatocele introduces fresh difficulties. To the diagnosis of the latter lesion I do not propose to refer at present. But I cannot avoid considering the diagnosis between parametritis and perimetritis, or, as the lesions are very frequently named, between pelvic cellulitis and pelvic peritonitis. I am the more disposed to grapple with this subject inasmuch as Emmet, in his recent work, refuses to recognise the practicability of distinguishing between the lesions, and groups the two classes under a common head of cellulitis. As I regard this a step in the wrong direction, I feel bound to point out those characters in the two classes of diseases that are reliable, as I conceive, in forming a differential diagnosis. I need hardly say that I consider that very many of the supposed differential characteristics which one sees written down in lists of distinctive points in text-books are frequently fallacious. I need hardly say, also, before a learned society like this, that up to the publication of Bernutz and Goupil's work parametritis was considered the far more common lesion of the two. But since the publication of this valuable work, with its easily intelligible appeals to post-mortem section, opinion appears to me to have rebounded to the opposite extreme, assigning an undue frequency to perimetritis.

As is so frequently the case in the march of scientific progress, truth occupies a middle position.

Before attempting to point out the essentials to the differential diagnosis, it may be serviceable to refer in a word or two to the anatomical connexion of the parts involved in the separate affections. It will be noticed that, so far as the uterus is concerned, there are at least six localities in which there may be formed parametritic deposits. For, 1st, we notice that in front of the uterus the peritonæum is reflected at a level at least as high as the internal os uteri, leaving the entire length of the cervix bared of peritonæum, and connected with the neck of the bladder by a plentiful layer of loose, fatless, excessively vascular connective tissue, which is specially adapted to be the nidus in which inflammatory action may be situated in the case of appropriate stimulus. 2d, The peritonæum, though covering the entire length of the uterus posteriorly, and even extending to a variable but always considerable extent over the upper part of the vagina, is so altered in its relation to the organ at or about the level of the internal os, as to leave a thick layer of subserous connective tissue equally adapted as the part in front to become the seat of inflammation. 3d, On each side of the organ there is found a space, triangular in shape, with its apex at either Fallopian tube and its base at the reflection of the vagina on to the uterus, which is not covered by peritonæum, is rich in bloodvessels and connective tissue, and thus is a fit seat for true parametritis. 4th, And lastly, between the layers of either broad ligament, particularly at the lower part of them, there is abundance of highly vascular loose connective tissue, in which inflammation may readily be set up. Inflammation situated in these latter positions is very frequently called phlegmon of the broad ligament. Thus, in front of the uterus, behind it, on either side close to the organ, and on either side more or less removed from it, we may have parametritis established.

It will be observed, however, that the situations in which such inflammation may take place, with the exception of the top of the triangles by the sides of the uterus, are low down in the pelvis; and as the upward advance of the inflammatory deposit meets the resistance of the unyielding peritonæum, the tendency of such inflammatory swelling must be to proceed downwards in the direction of the looser vagina. It follows from these considerations that parametric inflammation must of necessity be low placed and limited. The site of perimetric inflammation, again, involving as it does the entire surface of the pelvic peritonæum, though it dips deeply down between the bladder and uterus in front and the uterus and rectum behind, is subjected to no such restrictive influence tending to cause it to descend or to keep low down. It may and does rapidly spread, not only over the entire pelvic peritonæal surface, but upwards into the general peritonæum, running from coil to coil of intestine, and matting these together in a common mass, forming thereby a tumour which often extends as high up as the false ribs.

Besides this, the peculiar manner in which the peritonæum dips down into the pelvis around the uterus, in itself communicates a sort of arched-roof shape to the hardening occasioned by a fibrinous perimetritis, which is of itself diagnostic.

Having premised these particulars, we come now to gather together the chief points that help us to establish a differential diagnosis.

1*st*. It may be held as agreed on all hands that injuries and diseases affecting the upper part of the vagina and the cervix are more likely to set up a parametritis than a perimetritis, and that injuries or diseases of the body and fundus are more likely to be accompanied by perimetritis. The history of the onset of the affection and of its accompanying lesion ought, therefore, to prepare us for finding the one rather than the other lesion present.

2*d*. High position in the pelvis, and still more high position in the abdomen, indicate that the lesion is perimetric; whilst low position in the pelvis, and a tendency to hug the pelvic walls, and, as it creeps upwards, to cling to the bones and extend into the iliac fossæ, or to penetrate towards the buttocks through the ischiatic notch, tend to establish that the tumour is parametric.

3*d*. In estimating the importance of the high position of the inflammatory deposit, too much value can scarcely be put upon the relation of the vaginal portion of the cervix to the swelling. In the case of perimetric swelling the cervix uteri projects into the vagina with its full length, and consequently extends considerably below the level of the lowest part of the mass. But if the case is parametritic the cervix appears to be shortened as the inflammatory mass works its way downwards around the cervix. Consequently, the vaginal portion does not project along any part of the swelling, but may even fall behind it, or the outer os may be only flush with the surface of the lowest part of the inflammatory mass. This was particularly the case in the present instance, where it is noted that the inflammatory mass posteriorly projected downwards to near the vulva. In evidence of this statement, as sections are uncommon in such cases, I am glad to be able to refer to the case of Mrs Turnbull, who died in Ward xvi., old Royal Infirmary, 22d June 1878. In this patient's case, from the low position of the inflammation, and the curious manner in which it kept down on a level with the outer os and spread along the lower edge of the broad ligaments towards the pelvis, I diagnosed a pure parametric inflammation. The inflammation ultimately extended through the left sacrosciatic notch into the gluteal region. The patient died, and on section the accuracy of our diagnosis was fully established.

*4th.* Then it is well known that inflammation of the peritonæum is more apt to be associated with troublesome vomiting than inflammation which is extraperitonæal. The occurrence of vomiting in the course of an attack of pelvic inflammation is a strong indication that, if the inflammation had not already reached the peritonæum, it has done so coincidently with the onset of the vomiting. But too much stress cannot fairly be put on this symptom.

*5th.* The mode of upwards spread of the inflammatory action is also of great value. A pelvic peritonitis may spread at its wild will over the peritonæum. A parametritis must follow the disposition of the tissues in which it finds its nidus. It may spread along the anterior abdominal wall, selecting as its favourite direction the leading of the round ligament of the uterus, or it may follow the lead of the psoas, rising high in the posterior regions of the abdomen into the neighbourhood of the kidney, or it may occupy the iliac fossa, or burrow through the sacrosciatic notch to the gluteal region. These points are of importance in guiding us in regard to the extension upwards of the diseases.

*6th.* Lastly, the knowledge of the sites in which the pabulum for parametric inflammation is placed in the pelvis makes it probable that parametric disease shall be more localized in its nature than perimetric. Consequently, when we find a single inflamed localized mass behind, in front, or by the side of the uterus, the presumption is in favour of the view that it is of parametric nature rather than that it is perimetric.

To briefly recapitulate the points that guide us in diagnosis: When we find pelvic inflammation resulting from injury or disease of the upper part of the vagina or of the cervix, situated low down in the pelvis, and tending as it increases to descend farther and to be on a level with or even below the lower pole of the apparently shortened vaginal portion of the cervix, or to keep close to the pelvic walls, or to maintain a localized condition in front of the uterus, behind it, or on either side, or in either broad ligament, and to be unaccompanied with vomiting, we have reason to believe that the case is parametric in nature. On the other hand, when the pelvic inflammation arises in connexion with injury to or disease of the body or fundus, when it is high placed and occupies the inlet into the pelvis generally, grasping the uterus in a mass of surrounding hardness from which the vaginal portion projects with its full length, is accompanied by vomiting, and tends to extend rapidly upwards into the abdomen, then the presumption is that the inflammation is perimetric in action.

With these remarks I proceed to the report of the second case, which is as follows:—

Mrs M., aged 31, was sent to Edinburgh in the month of December 1879 by her medical attendant, to consult me regarding a recent onset of menorrhagia which had troubled her for several months. These attacks had been preceded by a suspension of menstruation for two months. The patient's medical attendant was in doubt whether she might not have had a miscarriage which had come imperfectly away, or whether there was not some intrauterine polypus. It may be stated that she had been married for several years, had given birth to one child, but had since been sterile. Her recovery from her single confinement had been slow, and was accompanied by symptoms that serve to show that she then suffered from suppurative parametritis.

On examination, on 12th December 1879, the uterus was found to be large and somewhat antiflected. The cervix uteri was decidedly hypertrophied and soldered to the posterior wall of the pelvis by some thickening evidently of an old nature, as there was no trace of tenderness in it on free manipulation. The outer os of the cervix was patulous. There was no tenderness in the neck or body. Both broad ligaments were clear, and the fundus and body freely movable. The sound passed fully three inches in a direction upwards and forwards, and caused no pain. Finding it impossible to establish a decided diagnosis without exploring thoroughly the interior of the uterus, I decided to dilate the cervix. It appeared to me that the retrouterine thickening was scarcely to be regarded as a contraindication to this proceeding, inasmuch as all acuteness had left it years ago, so far as I could ascertain. I accordingly proceeded to dilate the cervix by means of tangle tents. It was found a little difficult to effect this object, as the tangle tent proved too short for the elongated cervix. Accordingly, whilst the cavity of the cervix yielded well to a large tangle tent, the inner os was still found impermeable to the finger. This tent was left in for twenty-four hours; it was then removed and the vagina and cervix well cleansed by means of an antiseptic wash; and as there was no reaction and little pain complained of, a sponge-tent was now introduced through the inner os and allowed to remain for nearly twelve hours, so that admission was freely effected into the uterine cavity in the course of thirty-six hours. There was no distinct polypus found in the interior of the organ; but over the right side of the cavity of the uterus, and also over part of the anterior surface, the mucous membrane was distinctly roughened, irregular, and granular to the feel. Dr Playfair, who assisted me in the case, examined the uterus and confirmed this observation. I now scraped with the finger, as well as with a strong copper curette, all that could be got from this surface, and, having washed out the uterine cavity with a double catheter, put the patient to rest. There was a rigor next day, and on examination the uterus felt tender, but any threatening of metritis that presented itself disappeared in the course of a day or two; the pulse kept high, however, varying from 96-110, and the temperature rose to about 102°.

There was much rectal catarrh and tenesmus, the discharge being not fæcal, but absolutely pure colourless mucus. There was no repetition of the rigor, and there was no vomiting nor abdominal distention. There was, however, pain over the uterus, and the gradual formation of a large lump behind the neck and to the left side of the uterus. This lump projected against the front wall of the rectum, and distended the lateral reflections of peritonæum forming the inferior part of the fold of Douglas, so as to compress the bowel and induce the catarrh and tenesmus. The swelling could also be felt creeping up towards the pelvic brim on the left side. Poultices, rest, and morphia suppositories were used to relieve symptoms. On the evening of the 1st of January 1880, as there was now manifestly fluid in the retrouterine mass, and as I feared the formation of a rectal fistula, I asked Dr Playfair again to assist me whilst I aspirated the tumour from the vagina. The aspirator drew about four ounces of pus from the cavity of the abscess. The fœtid odour was perfectly disgusting. When examined the pus was found loaded with bacteria, but they did not appear active. The patient was very much relieved, and passed a good night. Her rectal troubles were nearly quite gone.

Next morning, 2d January, the patient was anæsthetized with chloroform mixed with three parts of absolute ether, and the retrouterine abscess freely opened from the posterior cul-de-sac of the vagina, care being taken, by means of a finger in the rectum, to guide the knife so as to avoid injuring the bowel or uterus. There was a considerable discharge of pus and blood. The cavity of the abscess was freely explored by the finger, and found to have somewhat irregular walls, and to be of considerable extent. The adhesions in its cavity were at the same time broken up. It was now thoroughly washed out with solution of carbolic acid through a double catheter, and the patient put to rest.

There was some abdominal distention complained of in the afternoon. As this was clearly due to flatulence, the direct result of the recent obstruction to action of the bowels, a dose of castor-oil was administered at night. This produced several copious evacuations and a complete removal of the distention. Ever after there was an entire subsidence of all disagreeable symptoms. Pulse and temperature returned at once to the normal. The tongue, which had been coated, became clean, and the appetite excellent. The only trace of the parametritis that remained was the thickening observable by double manipulation, and a slight degree of tenderness on deep pressure over the left side of the pelvis.

The cavity of the abscess was washed out daily for five or six times by means of a double catheter, and then for a few days at intervals of two days. It discharged freely and contracted rapidly, the fœtor rapidly disappearing. The patient was up and going about by the 12th of January, out on the 18th, and left by train on her way home on the 21st. Nothing remained as evidence of the abscess and large amount of exudation behind and to the left of the uterus except a slight degree of thickening towards the left and posteriorly, similar to what was there when I first saw her.

The above cases present nothing peculiar in regard to the general treatment of parametritis. It may be observed that we treated symptoms, allaying pain by soothing local applications and by morphia, subduing fever by quinine, and supporting strength. But, in regard to the surgical treatment, both cases show the importance of free incision, so as to avoid the formation of a fistulous opening into the bowel, and the slow cure that follows when that takes place. Nothing could be more hopeless-looking than the condition of the first patient at the time when the free incision was made. And it must be admitted that the condition of the second patient was sufficiently anxious at that time. The result in both cases was sufficiently satisfactory, and in the second rapidly so.

Considering the great trouble that usually accompanies the discharge of a parametric abscess into the bowel, bladder, or uterus, or when it perforates the abdominal wall, it becomes a question of great practical import how early a parametric abscess ought to be opened, and where.

I have seen, in consultation and otherwise, no small number of parametric abscesses that have spontaneously discharged their contents into the bowel. I have also watched a smaller number of these which have opened into the bladder or have penetrated the abdominal wall. But my experience is not favourable to allowing such a termination to a parametric abscess, provided it is in our power to prevent it. They have, when such a result has been allowed, run a very chronic course, leading to great exhaustion, slow recovery, and much discomfort to the patient. In one case I have seen fatal results follow in the train of an abscess that burst into the bladder; and in another that burrowed its way through the left ischiatic notch and pointed in the gluteal region a like result followed.

An important objection to permitting spontaneous opening is the danger that the abscess shall open into the bowel or viscera under conditions unfavourable for complete evacuation of the contents of the tumour. Consequently the disappearance of the abscess is slow and unsatisfactory. There is also another important reason why we should empty these abscesses early, and it is that they are so liable to become putrid although not communicating with the external air. Whether the bacteria which, I suppose, we must assume traverse the irritated intestinal walls to reach such an abscess are capable of originating destructive septicaemia or not, I am not in a position to determine. I believe that Mr Lister regards the bacteria accompanying such a putrid abscess as the above to be comparatively harmless, and has, I have been told, shown that they do not reproduce their kind in a cultivating fluid. We unfortunately did not put this matter to the proper test in the present instance. As will be remembered, we noticed that the bacteria, though abundantly present in the pus aspirated from the abscess, were not active in their movements. But, these considerations notwithstanding, I must confess to entertaining a healthy horror of such a stinking abscess, and to feel greatly at rest when I have given it its quietus by free incision.

A difficulty that was wont to exist, viz., uncertainty as to whether there is or is not pus in a given pelvic tumour, is now removed. We can, without risk, if we employ ordinary care, aspirate any such tumour, and determine with ease whether it contains blood, serum, or pus. That being so, the course of action is wonderfully cleared; and I must say that, although I well know it is a disputed practical point, I am from experience prepared rather to cast in my lot with those gynæcologists, such as Thomas, who advocate early and free incision of pelvic abscess, than with such as Bequerel, who object to that measure. I think, moreover, that the two cases recorded are important contributions to the history of distinctly unpromising cases which have been successfully treated by free incision. Accordingly, I should wish to be regarded as supporting the recommendation of those who urge evacuation of such tumours through the vagina, if possible, so soon as it is proved that pus is present in the mass.

In the case of collections of serous effusion—but this is usually found in cases of perimetritis—there is little if any need to interfere by incision. Such collections of serum usually disappear spontaneously.

But I must now hasten to consider the third case, which belongs to a very common class of parametric inflammation, I mean puerperal. The record runs as follows:—

M. H., 25 years of age, was admitted to Ward xvi., old Royal Infirmary, on 3d June 1879, complaining of exhaustion, with severe pain in her right side. The commencement of her illness dates from her confinement, which occurred two months ago. She states that it was prolonged and difficult, but terminated spontaneously. On examination tenderness was found on pressure, and dulness on percussion in the right iliac region, where also a tumour could be felt extending over a triangular area bounded superiorly by a line passing from the spine of the left pubic bone to a point an inch below and two inches to the right of the umbilicus, thence by another line to a point in the right iliac crest two inches behind the anterior superior spine, whilst the third side was formed by the anterior portion of the right iliac crest and by Poupart's ligament. On examination per vaginam the uterus was found partially movable, but displaced towards the left and posteriorly; the bladder also was pressed deeply downwards. To the right of the uterus, but not specially connected with it, occupying the right half of the inlet to the pelvis and part of the abdomen, a tender mass could be felt about half the size of a child's head, apparently made up of inflammatory exudation. There was only slight fulness and increased resistance on the left of the uterus. On introducing the sound with the view of establishing, if possible, the exact relation subsisting between the inflammatory swelling and the uterus, its point was felt to suddenly perforate the uterine wall at or near the fundus. There was no unusual force being exerted at the moment. Unmistakable evidence of the fact of perforation was obtained, for the point was carried forwards and brought to impinge against the anterior wall of the abdomen, close to the umbilicus, where it could be readily and easily felt, whilst the heavy uterus maintained its original position low down in the pelvis. There was no special pain complained of from this accident. The temperature in the evening rose to 104°, but fell the next morning, and there was no other symptom indicative of any result good or bad from the perforation of the uterine wall. Rest and poulticing constituted the treatment adopted.

On 8th June the swelling had extended considerably, being more marked anteriorly and towards the left than on the former examination, and a certain proportion of the mass was noticed to pass behind the uterus. Quinine and iron were prescribed, and a blister applied over the right groin.

On examination, 12th June, the thickening in front of the uterus was found somewhat diminished, the uterus tolerably movable, and its fundus, felt lying somewhat towards the left of the principal inflammatory mass on the right side, was freely movable. The inflammatory swelling on the right side, as a whole, was ascertained to be slightly movable, but pretty firmly attached to the right side of the pelvic wall. It appeared to occupy the position of the greater part of the right broad ligament, diminishing in size with that structure as the latter approaches the uterus. Something like obscure fluctuation was detected on double manipulation (abdomino-uterine).

On the 19th June, the temperature having risen to 103°, suppuration was suspected, and the aspirator needle passed from the groin into the centre of the swelling in the right broad ligament. No pus, and only a small quantity of blood, was drawn off.

On 30th June the thickening behind the uterus and to its left had almost entirely disappeared, while the mass on the right side still remained firmly adherent to the lower and anterior part of the right iliac fossa. No indication of a spot of softening could be felt per vaginam in any part of the swelling. The patient was ordered quinine and iodide of potassium. On 15th July the left side of the pelvis was found to be quite clear, the uterus tolerably movable, with its fundus dragged towards the swelling on the right. The tumour was much shrunken, and somewhat movable towards its inner side, but fixed to the pelvis at its outer aspect.

On 24th July the uterus was found displaced upwards and forwards towards the right, where the fundus was attached to an oblong structure about 2½ inches long by 1½ inches broad, the remains of the previous inflammatory exudation. A well-bent sound passed into the uterus 2½ inches in a direction upwards and towards the right. The patient was dismissed cured on the 31st July.

The case above described is one of common occurrence. It was a parametric phlegmon, at first affecting chiefly the right broad ligament, but ultimately extending to the right iliac fossa, to the connective tissue between the neck of the bladder and the anterior surface of the cervix uteri, as well as behind the cervix and slightly towards the left. The record of the case fully bears out the accuracy of the views already explained in this paper in regard to the anatomical conditions that regulate the spread and extension of a parametric inflammation. The case is also of interest in so far as it demonstrates the tendency which parametric inflammation shows of establishing itself in a limited part of the pelvis, as compared with the peculiarity which perimetritis possesses of spreading rapidly over the entire pelvic peritonæum. It also brings to mind another fact that I have not as yet very specially explained, viz., that parametric inflammation is that form of pelvic inflammation which is most liable to follow delivery. But the points of most importance in this third case are two: 1st, It demonstrates that the uterus may be perforated without any serious consequences following; 2d, That the aspirator may be freely used in pelvic cases as a means of diagnosis, without risk of injury following its employment. There was not the slightest doubt that the uterus was perforated in this case, and yet the only symptom which arose was a very transient elevation of temperature, much more likely to have been occasioned by the physical explorations as a whole than to be referable to this accident.

Again, had I plunged a bistoury, or even inserted an ordinary exploratory trocar, into the swelling in the present instance, even when from careful manipulation of the tumour and examination of the collateral symptoms, especially of the temperature, I had come to the conclusion that there was most probably pus contained within it, I have very little doubt but my patient would have suffered severely from the interference. As it happened, however, the absence of suppuration was proved, and the patient saved from any harm. It is perfectly surprising with what freedom we may aspirate abdominal tumours without causing injury.

Only a short time ago a patient in the Royal Infirmary suffered disagreeable symptoms from the pressure of two encysted masses that projected downwards and forwards, one on each side of the spinal column. These were both aspirated anteriorly, and found to contain pus. The aspirator on both occasions traversed the peritoneal cavity, whatever else it traversed, as the masses were clearly retro-peritonæal in situation, and yet there was only relief afforded and not a trace of harm. Relief resulted from the removal of tension, as twenty ounces of pus were drawn from the one tumour, and twelve from the other. In the aspirator, therefore, we have an important aid in the diagnosis of the exact nature of pelvic tumours, which places us at a great advantage compared with our confrères when the exploratory trocar was the best method to adopt. But I must bring my remarks to a close by again expressing the hope, that the record and criticism of these examples of a well-known lesion may not be altogether without some value to the Society.

## ARTICLE III.—*Physics and Physic.* By ALFRED DANIELL, M.A., B.Sc., Lecturer on Medical Physics at Minto House.

IN an address which I recently had occasion to deliver at Minto House, I gave a *résumé* of the bearings of the inductive and the deductive methods respectively on scientific research in general, and illustrated by examples the modes of combination of these two methods of reasoning, which are necessary for progress in scientific knowledge, while I specially insisted on the necessity of discriminating with the utmost precision between the ascertained laws of nature and the hypotheses, not yet raised to the rank of law, which have been suggested as probable explanations of phenomena observed. I then proceeded to discuss the relations of precision of thought, and the necessity of exactness of knowledge, both of the facts which we have at our command, and of the limits of our ignorance, to the special studies which are usually comprised under the general designation of medical science, and, pursuing this subject, made some remarks, the tenor of which is indicated in a somewhat amplified form in the following paragraphs:—

"Just as the history of medicine has been shown to present many most striking examples of the evil wrought by hasty assumption of hypotheses as ascertained truths, so it does in a most interesting manner confirm in many ways the partial truth of Bacon's statement in his *Novum Organum*, that 'human knowledge and human power are coincident.' As knowledge has become more precise, so have the extent and availability of the resources of medicine become greater. Though these are small in comparison with what we desire them to be, yet they are very great when compared with those at the command of the fathers of the healing art.

A sense of the duty of observation and research has been of later years the guiding principle of the life work of those members of the medical profession who have been most successful in increasing the resources of medical science. In the recognition of this duty there have been none more prompt than those connected with the teaching and practice of medicine in Edinburgh, which has been, ever since the Infirmary and Medical School adjusted their relations and got into working order, the very home and centre of clinical teaching, clinical observation, clinical research, clinical work of all kinds.

But clinical observation of the old-fashioned kind could have had but a limited utility; it must needs have proved itself insufficient to extend the knowledge of the profession beyond a certain limited range, if the more precise methods now in vogue had not been introduced and adopted. These precise methods, however, are based on the application of physical principles, which it is increasingly necessary to comprehend familiarly, in view of the present extension of instrumental means of diagnosis and treatment.

It is now sixty-one years since Laennec published his work on *Mediate Auscultation; or, the Use of the Stethoscope*. This was in 1818, the year before Sir Robert Christison graduated, and four years before he wore the professorial gown. Before that time, neither in Edinburgh nor anywhere else did that familiar and valuable aid to diagnosis exist. On its advantages this is not the place to enlarge; but I may ask, Who would now willingly return to the days when these things were not? Yet Professor Helmholtz narrates that at a considerably later date the use of such instrumental means of diagnosis was very much discouraged by the seniors of the profession in Germany. It was considered unnecessary to the wise and skilful physician, who by his comprehensive glance and his erudite touch was or should be able at once to declare the nature of his patient's malady; while it was exceedingly disrespectful to his patient, who, though he were ill, was—Heaven be thanked!—yet a man, and not a machine, that he should have his bellows and hydraulics overhauled by such base mechanic means. Even the use of a watch was in some sense a confession of incompetence, and was prudently avoided by those who affected an appearance of sagacity.

Such objections were, however, but rarely expressed in print—*cauti seniores!*—and their echo is rapidly dying away. The new order of things has been inaugurated and established. Instrumental means of diagnosis have been multiplied, and the habitual use of them has gradually become a commonplace of medicine.

Pleximeters, specula, the ophthalmoscope, the laryngoscope, and many other such instruments have been introduced into clinical teaching and into ordinary medical practice, and diagnosis has been rendered by their agency increasingly precise; clinical observation has become more valuable, and the resources of Medicine and Surgery have been extended.

During the same period the science of Physiology has grown up from small dimensions, and it has grown up under the action of the same causes. Just as the clinical physician has become more or less a physicist in his modes of thought and in his use of apparatus for various measurements, and for recording the phenomena he has to deal with, so has the physiologist in an even more marked degree. Professor Helmholtz at first found it difficult to persuade his colleagues that a teacher of the noble science of Physiology could desire to condescend so low as to perform experiments, just as a chemist does. In those days the microscope was inaccessible from its price, and was by no means acknowledged as a physiological necessity. Now we know how it has been the means of imparting to us information which has built up the extensive sciences of Normal Histology and Pathological Histology.

Many parts of physiology, especially those relating to the phenomena of the nervous system, and such as depend on a knowledge of anatomical detail, cannot yet be said to be thoroughly understood; and if we exclude that part of pure Chemistry called Physiological Chemistry, which deals with the composition and chemical relations of the normal products of the organism,—if, indeed, this be a part of physiology,—it may broadly be said that the only parts of physiology which we can affirm ourselves thoroughly to know are those which depend immediately upon our appreciation of physical principles, or can be investigated by an application of physical methods. Physiology, then, a thorough and intelligent knowledge of which is essential to good sound pathological practice, is at least as dependent upon a knowledge of physics for its due comprehension as it is upon that of the principles of chemistry or the facts of anatomy.

As the science of Physiology owes so much to the study of physics, so it cannot be understood by those who are ignorant of the principles of Natural Philosophy. Numerous questions arise for discussion, and their treatment involves the use of statements concerning such things as elasticity, waves, heat, leverage, etc., etc. The teacher of physiology at present finds himself sadly embarrassed by being impaled on the horns of a dilemma. He has to do his subject full justice, and to expound to his students such facts and opinions as he considers well established and well grounded, or otherwise deserving of attention. But he knows that there is at present no guarantee that his students know anything at all of physics; and consequently, when he speaks of, say, the flow of liquids through pipes whose walls are elastic, he has two alternatives before him: he may either assume the truth of the propositions he enunciates, proceed with his physiology, and let the students flounder along as they best can; or he may courageously assume all natural knowledge as his province, and may add to the labours of his course the task of teaching his students the elements of physics. In the former case he cannot but feel that those students who have not previously learned physics do not understand him, and cannot possibly profit by his teachings; in the latter he finds that his lectures are overloaded, and must be conscious that his students fail to follow him as he is hurried onwards by press of matter.

Physiology has become a body of knowledge which requires a hundred lectures for its exposition, without any such complication as is involved in explaining physics. The physiological teacher is fortunately able to assume that his students understand what is meant by such expressions as oxidation, chemical combination and decomposition, elementary or compound substances, acids, alkalies; but when he speaks of energy, of force, of work, of electricity, he has to go out of his way to explain these matters.

The same difficulties beset those who write a book on physiology. Such works as these of Hermann, which assume a knowledge of physics on the part of the reader, and go ahead with the physiology in the briefest fashion, never stopping to explain such matters as molecular energy, refraction of light, and the rest, are almost incomprehensible to the majority of students here; while the books which treat of both physiology and physics concurrently attain but a qualified success.

But the troubles of the teacher and the writer on physiology are, as I take it, but small when compared with those of the unfortunate student of medicine in these scientific days. I need not ask you to imagine—many of you have experienced, many others will experience—the feelings of a student on being seated in a physiological class-room to take notes on Electrotonus, to choose only one example out of many that occur. Ready though he be and well disposed to work and to learn, he has the cup of knowledge dashed out of his hands. Sound-waves roll into his ears, bearing with them a floating wreckage of such words as anode, kathode, polarizing current, electrotonic current, negative electrodes, negative variations, non-polarizable electrodes, until, bewildered, discouraged, and rebuffed, unable to take verbal notes, and unable, from not understanding the subject, to take condensed notes, he relaxes his efforts, his enthusiasm dies away, and he degenerates, if no worse happen to him, into one of those students who on no account read anything which is not absolutely necessary for a swiftly approaching examination.

Yet the subject in question is very simple and beautiful, and is sufficiently easily understood by all those who are prepared to comprehend the terms of the propositions advanced; but, like many others, it never fails to discourage those who come up unprepared.

But it is not the student alone who suffers from the want of a knowledge of physics. The young practitioner finds himself face to face with questions of fact, with problems of matter and energy, and engaged in the daily solution of difficulties involving the application of physics. How is he to know what he has never been taught? Is such a man disposed to bless the *Alma Mater* which took care that he knew the forms of the pollen-grains in such-and-such useless plants, and the number of teeth possessed by such-and-such a rare marsupial, but left him ignorant, as far as she was concerned, of the principles of electricity, of optics, of acoustics?

If he has to deal by electrolysis with a nævus, which pole is he to insert, and which will he apply externally? But which is the positive and which is the negative pole in the actual battery?

What is a Faradic current? In what way does it differ from any other current? How is it to be controlled so as to be under the will of the surgeon?

What is Dr Matthews Duncan's retentive force of the abdomen? If there be such a thing, what is its direction, what is its amount, and how is it measured? If there be no such thing, how would you sustain your contention?

Would you oil an electro-magnetic machine to make it work more smoothly? If not, why not? If you may do so at some places, but not at others, what are the places at which you may do so?

How does it come about that you are to look through the small hole in the centre of the mirror of the laryngoscope?

If a man complain of coloured specks before his eyes, which he affirms to be increasing in size, is he getting worse or better? What are your reasons for your opinion?

Do you ever use aspirators? How are they used? Whether is it better to use the instrument according to rule, or by reason of understanding the matter in such a way that you could find out for yourselves the mode of using it, and of finding out what is wrong if it does not work perfectly?

Did it ever occur to you that a heavy man running upstairs may be doing work at a rate which an ordinary horse cannot keep up?

When you find papers on pressures, mechanisms, tensions, etc., presented to your notice at meetings of medical societies, or in the pages of medical journals, what do you make of them? They are simply not understood, and are passed over; while, if you had a certain amount of mechanical knowledge at command, you would find pleasure in reading them if you agreed with them, and if not, you would contribute to the progress of medical science by discussing them.[1] Even if the young practitioner determine to read physics, he will find difficulty in choosing a book to study. The small compendia are very difficult to read, and all the books in ordinary use in this country are written without any reference to the wants of the medical man, so that many of the parts of physics which would be most useful to him are least fully treated of, as it happens, in them. As examples of such subjects we may take vibrations and hydrodynamics.

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[1] I may here mention that the diagram contributed by me to Dr Hart's paper in this journal for July 1879 is not correct; but the error in it (involving the determination of the exact point of rotation in no way affects the result obtained, and will be corrected in any future reprint.

The young practitioner every day amends somewhat his fault of youth. In time be becomes an experienced man, an old man, an authority. It becomes him to write a book. All the physics he ever learned were learned as something apart from his medical studies, and now he has for the most part forgotten them. But his evil fate has landed him in precise and scientific days, and he must, above all things, be precise and physical. So much homage he pays to the tendencies of the age. He surrounds himself with physical books, written in a jargon unknown in his youthful years; he sadly toils on until he has effectually misunderstood some irrelevant propositions; he imports these into his discussion, and brings the medical profession into contempt in the eyes of outsiders. I am not drawing a fancy sketch; this paper might be rendered amusing by giving you names and references; but let us pass on.

If I have succeeded in stating my views, according to which the study of physics is a necessary part of the education of every medical man, I must now expect in my turn to be asked by you what I propose doing in the capacity in which I present myself before you. This course is one which, as far as my abilities extend, I hope to make a tolerably complete one of Natural Philosophy; but those points in which you are or will be most interested I shall endeavour to explain to you with the greatest care. I have to bear before my mind the fact that you are not embryo astronomers, engineers, or layers of telegraph cables, but that you have committed yourselves to the study of medicine; and physics treated with this in view deserve the name of Medical Physics in a special sense. But, you may ask me, have I any precedent for calling the subject we are about to study by such a specialized name? Certainly. In France 'la Physique médicale' is one of the compulsory subjects comprised in the ordinary curriculum for the degree. They would be very sorry to dispense with such a subject, which they regard as one of the most useful in the course of study. For a long time this has been a subject taught in French schools by a professor in the Faculty of Medicine different from the one engaged in teaching in the Faculty of Science. Of late years there has been more attention paid to this subject than there was some time ago, and the publication of such works as Gavarret's on *Speech and Hearing*, and others, has signalized a revival of interest in this subject considered as a necessary part of biological study. The impetus to the later developments of this interest in medical physics was given by Professor Fick, who in 1867 published a small work on *Die Medizinischer Physik*, which was immediately followed by another on the same subject from the pen of Professor Wundt of Heidelberg. In 1869 and 1870 two works were written in the French language by Gréhant and by Desplats and Gariel respectively. The corresponding English work is not yet published, but I hope it soon will be.

The spirit in which I mean to work I have endeavoured to explain; the mode and the detail we shall ascertain in the sequel."

Now remain but a few considerations on which I might enlarge somewhat fully, but shall restrict my remarks to mere headings, seeing that they formed no part of the original address.

In giving evidence before the Scottish Universities Commission of 1878, Professor Sanders said, after suggesting various additions and corresponding readjustments of the course of study:—

> "4200. Q. And you don't apprehend that what you have suggested would be felt as any material increase of the burden now imposed on the students?
>
> "A. I think not; the best students take all these courses at present; and with regard to natural philosophy, it is now absolutely essential to understand physiology and pathology. Formerly natural philosophy was to a certain extent part of the course of chemistry; but since chemistry has become so enormous a science, the part of the lectures on that particular branch has been left out, and students have in this way been deprived of a portion of the instruction which they formerly used to get."

This leads me to allude to a remark made by Dr Balfour in reply to Dr Batty Tuke's strictures on the comparative uselessness of botany, to the effect that our ancestors had, in their wisdom, instituted the present curriculum, which has worked well, and needs no change. The wisdom of our ancestors—for they were nothing if not practical—established a curriculum which did work well, but which was very different from that into which, in the course of time and by unsystematic change, it has developed. The student of medicine was provided with an elementary smattering, correct as far as it went, of chemistry, of electricity and magnetism, of heat, light, and physics in general, of meteorology, of geology, of mineralogy, of physical geography, of natural history, and of botany. I am assured by gentlemen who studied under Professor Jamieson and his contemporaries, that in the subsequent actualities of life, especially on foreign service, they found most useful precisely those branches of knowledge which have now dropped out of the curriculum, and some of them, on returning to this country, are amazed to find what subjects have been retained and what eliminated.

Professor Spence thinks that the course would be overloaded if the student were compelled to attend and pass the subject of natural philosophy in addition to those of the present first professional examination. If I may set my opinion against Professor Spence's, I would point out that my acquaintance with students in the first two years of their course shows me that the work is very unequally distributed. One may preach to students *ad nauseam* on the obligation they are under at once to commence their work for the first examination; but as long as their examination is so far ahead, they will not commence at once, and they are very liable to inaugurate their career by acquiring habits of indolence and procrastination. I think there would be no difficulty in adding natural philosophy to the present curriculum if the students were allowed to break the present examination into two, and to present themselves for two subjects of the four (zoology, botany, chemistry, physics) at any convenient diet; and as I think the first professional examination is, to a greater extent than any other, "a necessary evil," I should be delighted to see any practicable scheme brought into effect whereby not more than twelve months may be spent in preparing for it.

Professor Turner gave the following evidence, which, being in a pleasant, conversational style, shows very well what are the opinions of a gentleman whose mind is eminently accessible to rational conviction, but who had not previously, as it seems, paid any special attention to the subject of this paper. He first pointed out that if attendance on natural philosophy were made obligatory, it would inconvenience the colonial and English students who have spent a certain time at their own schools, and then the evidence proceeds thus:—

> "2402. *Dr Muir.*—Do you not consider that instruction in natural philosophy is important?—Not, certainly, so important as instruction in anatomy or surgery or in medicine. I look on it only as an accessory or secondary subject, not as a fundamental one.
>
> "2403. *Professor Huxley.*—But comparing it with botany or natural history, or even with chemistry, is it not as important to a student of physiology that he should have a sound conception of the principles of natural philosophy as of chemistry?—Yes; but I think you would get what is needful by putting it more specifically amongst the subjects of the preliminary examination than you have at present, without rendering it a compulsory class. . . .
>
> "2404. But supposing you had to consider a curriculum afresh, without any practical difficulties in your way, and that you would naturally make those subjects compulsory which had the most direct bearing on the studies of the medical student, would you not then place natural philosophy almost in the front rank of compulsory subjects?—I think it is undoubtedly quite as important, I would say, as zoology.
>
> "2405. Is it not much more important than natural history, and as important as chemistry? Can a man understand the simplest notions in physiology without some clear conception of natural philosophy?—It would be difficult, I admit. But cannot you enable him to get it by rendering more precise the examination on that subject in his preliminary examination?
>
> "2406. The reply which has been made to that argument before us is, that in that case you don't secure anything beyond book cramming, whereas it is most important that the student of medicine shall have a real, and to a certain extent a practical knowledge of natural philosophy.—Then would you ask him to work in a laboratory and perform experiments?
>
> "2407. Don't you think it might be desirable that a man should have as practical a knowledge of natural philosophy as he is required to have of chemistry?

—If he were going to be a professed physiologist, certainly; but for an ordinary medical practitioner, I don't think so.

"2408. But if he is to have a rational comprehension of physiology, can he get on a step without sound ideas in the elements of natural philosophy, at any rate?—But I think he may get his knowledge of the elements of the subject from reading.

"2409. May it not be said that he would also get a knowledge of the elements of chemistry in the same way?—But, as a professional man, he has to apply his knowledge of chemistry. He has to test the urine, for instance; and it may be necessary for him to test the blood, to test milk, to examine for poisons, to prescribe and compound chemical substances. These applications of chemistry come into his ordinary professional life.

"2410. Does he not also require to understand what happens in a perforated wound of the thorax? and can he do that without some little knowledge of natural philosophy?—But I think such a knowledge as he would get by reading or private study would tell him that. Besides, you have already three subjects of the first professional examination, viz., botany, chemistry, and zoology; and if you were to add natural philosophy, you would still further take up the time of the student in his early years, and give him still less time to apply to the study of the fundamental subjects of physiology and anatomy.

"2411. Admitting the whole force of that, is there not an alternative proposition, that some of the things which are now compulsory might have to go as less important than natural philosophy?—The question might fairly be raised if you make natural philosophy compulsory; then a student should have his choice between attendance on botany and natural history."

And Professor Turner eventually states that, in his opinion, the good of the student would be best consulted by the subject of natural philosophy being compulsory, and either zoology or botany being required as alternatives.

Professor Rutherford maintains that physics should rather be comprised within his course than within any other, and seems to regard any attempt to teach physics to medical students outside his course as somewhat an encroachment on his province; at least, such is apparently the gist of his remarks on this subject. From what I have said before, it will be plain that I am compelled to regard this as an impossibility; two lectures and a half are necessary to explain the leading points of the subject of elasticity, with experimental illustrations, in such a way as to teach it; three experimental lectures are required on the subject of vibrations; at least one on charts and the graphic method, and so forth. I fail to see how these matters can be compressed into odd quarters-of-an-hour, for though a great deal can be said in fifteen minutes, very little can be taught; and since I think that, as in a controversy between lectures and books, lectures can only prove their *raison d'être* to be in the much greater facility they afford for supplementing the information which could have been derived from books by the explanations and experiments whereby the principles under discussion are elucidated, for making the subject lectured on more interesting, and for imparting a personal stimulus to the students, and in the opportunities which they permit of guiding the student in his own studies, so as to prevent him from wasting his energies, and of enabling him to acquire a more real and intimate acquaintance with what he has an opportunity of seeing; since I think that the exercise of such personal influence is the high function and privilege of a teacher, which is higher even than the duty of giving the results of the latest investigations, and is certainly a more noble task than that of endeavouring to replace text-books; and as I believe that, in the case of a teacher of physiology, and know that, in the case of a teacher of physics, he who turns his attention to the points in which he knows the students find most difficulty, and hastens slowly, proceeding with intelligible deliberation, satisfying his own mind as he proceeds that it is not his fault that his teaching is not understood, will find the time at his disposal all too short, and this even in the case in which he does not attempt to exhaust his subject; so much the more am I convinced that any teacher of physiology, in the present state of that body of knowledge, does his own cause no service, and is unnecessarily apt to fail in his own function as an upbringer of young physiologists, who adds to the sufficient work of his ordinary duty the huge additional burden of teaching physics. And more, it is contrary to sound principle to attempt to teach elementary physics and their applications in the same course: no one, for instance, would propose to teach engineering students the action of machines and the elementary dynamics at the same time—they must proceed from the elementary to the advanced.

Under the regulation which at present prevents the student from appearing for his first professional examination till eighteen months or two years have expired, the latter part of the course is somewhat overloaded, but during the second summer some students find that they have some difficulty in filling up their time. This being so, I think that all practical ends would, in the meantime, be secured by permitting time spent by the student in attendance on a recognised course of natural philosophy to count towards making up the *annus medicus*. Professor Crum Brown thinks (Ans. 1472) that it would be very advantageous for students to attend a course of natural philosophy, even if they were not examined at all. If this privilege were granted, I think that a number of students would gladly avail themselves of it, and as long as the present arrangements are in force it would be easy to try the experiment. I beg to suggest this for the consideration of those who are interested in the subject.

## ARTICLE IV.—*Remarks on the Diagnosis and Treatment of Scabies.*

By WILLIAM SANG, M.B., Broughty Ferry.

SOME years ago, having been connected professionally with a district school in the east end of London, I was brought much in contact with cases of skin disease amongst children. The great majority of these were cases of scabies; and as children were admitted twice a week, and generally came from the dirtiest slums of Poplar and Whitechapel, it was very rarely that we had admissions without one or two of the children suffering from this complaint.

On admission every child was carefully examined, and, if found to be suffering from any contagious disease, was placed in quarantine, and perfectly cured before being allowed to enter the house and mix with the other inmates.

Coming almost constantly in contact with the disease enabled me to devote a little attention to it, and to note one or two of the most important points in regard to its diagnosis.

The eruption being the prominent and striking feature of the disease, it is necessary in the first place to examine its distribution and describe it. It is generally considered as papular or vesicular in the first stage, and, when allowed to run its course in individuals of filthy habits, becomes pustular. The purely papular or earliest state of the eruption, looked at from a practical point of view, may be disregarded, as in practice it is either the vesicular or pustular condition that is met with. Dr M'Call Anderson of Glasgow, whose large experience is well known, takes exception to its being described as a vesicular disease. In his work on parasitic affections of the skin he says, "The custom of describing scabies as a vesicular eruption is very reprehensible and apt to lead to error, for those who have studied its manifestations are aware that vesicles are not met with in every case, and, what is more, that vesicular are not the most common forms of the eruption." Farther on he states that "papules are often mistaken for vesicles." We must bear in mind, however, that the converse of this is also true. Indeed, I have once or twice seen vesicles mistaken for papules at first sight, and it was only after pricking them that their true character was known. Dermatologists generally agree in describing it as a vesicular disease, and my own limited experience would lead me to adopt this view.

The vesicular stage is, I think, on the whole most common. Patients of ordinarily cleanly habits or their friends generally have their attention called to it in this stage, and, if it does not disappear after taking some slight purgative and using some simple external applications, they generally consult their medical adviser, when the following characters will be noted:—The vesicles are generally small, in some cases very small, pointed, or rather conical, and isolated. They are never found in clusters, like those of herpes. They are generally situated in the clefts of the fingers, and more or less scattered along their lateral aspects, a few being found on the posterior aspect, but never on their anterior; also between the cleft of the thumb and forefinger, and along the outer or ulnar side of the hand, never on the palm of the hand.

They are almost invariably found encircling like a bracelet the anterior and lateral aspects of the wrist, and scattered here and there on the anterior surface of the forearm, but very few, if any, are found on its posterior surface. Sometimes the eruption is found on the feet in the clefts of the toes, upon the dorsal aspect of the foot, around the ankle, and along the anterior and outer aspect of the leg. On the abdomen, between the umbilicus and pubes, and on the inner aspect of the thighs, a very characteristic condition of the eruption is met with. The vesicles generally have been torn and caused to bleed by scratching, and their place is occupied by a more or less bloody scab. In no case has the eruption ever been known to attack the face or head, and only in a few cases is it seen on the back or shoulders. The pustular stage, or scabies purulenta, as it has been called, is only an advanced or neglected condition of the vesicular, and, in its milder form, only one or two of the larger vesicles in the clefts of the fingers, around the wrist, and upon the forearm, enlarge and become filled with a thick, viscid, yellow fluid or pus. This state of matters, however, still being allowed to run on, we observe that the bases of the yellow vesicles inflame, the vesicles themselves burst, and the yellow fluid exuding forms irregular and dirty-looking yellowish scabs. Sometimes in this condition the whole hand may present a swollen and inflamed appearance, the inflammation being of a purplish hue and erysipelatous in character.

So much for the general characters and distribution of the eruption. Coming back again to the early vesicular stage, and confining our attention to a single vesicle, we observe that it is small and conically-shaped, containing, when pricked, a little clear watery fluid. Springing and running more or less perpendicularly from its base is seen the narrow furrow or cuniculus, at the extremity of which, in a little depression under the epidermis, the insect acarus scabiei is generally found nestled. This cuniculus varies in length from about one-eighth to one-fourth, or even half an inch, is curved, the curve formed being more elliptical than circular, and, when examined carefully, is found to be a tunnel or furrow running from the vesicle to the insect. In fact, its appearance is that of a dark curved serrated streak shining through the epidermis. It is attached to the great majority of the vesicles.

One symptom, also, of the disease which requires to be noticed is the itching, from which it derives its popular name of itch. It is sometimes very intolerable and annoying to the patient, being always worst in the evening after becoming warm in bed.

And now regarding the diagnostic points of scabies. In general physicians are satisfied that the disease is scabies when they find a vesicular eruption on the hands, fingers, and forearms, accompanied with intolerable itching at night, especially after going to bed; but from observation I am satisfied that this is not sufficient, and sometimes leads to cases which are eczematous in their character being pronounced itch, and to cases which are really itch, but where the eruption is of a very meagre description, being overlooked. In addition, the cuniculi should be looked for, and one or more of the insects picked from their beds and recognised.

It may be argued that this cannot be done without a microscope, which cannot be always at hand. Of course, if a microscope is at hand, so much the better—the animal will be more clearly demonstrated; but it is not necessary. Nothing more than a good sharp needle, a good pocket lens, and a glass slide is required. With the needle the epidermis is gently removed from the end of the cuniculus, and then, by gently placing its point into the depression, the little creature clutches it at once, and is withdrawn. Its appearance to the naked eye is like a very minute pearl; and when placed on a glass slide, which sometimes requires considerable care, to avoid injuring it, with a good pocket lens its insect character is easily recognised. On several occasions I have picked from six to ten acari off one patient. It is only from between the fingers, along their sides, and round the wrist that I have found them. On the legs and trunks I have searched on various occasions for both cuniculus and insect, but have never been able to find either. From my experience I am decidedly of opinion that, in addition to the character of the eruption, the presence of cuniculi and the demonstration of the insect must be regarded as the diagnostic marks. No doubt, a very puzzling case may now and then present itself, where, from the disease being complicated with eczema, neither cuniculus nor insect can be made out. In these circumstances Dr Anderson places great importance on the evidence of contagion. In the *Lancet* of 4th April 1868 there is a very instructive paper on this point by Dr C. Hilton Fagge. He calls attention to a case which came under his notice in which the vesicles were large like bullæ, and no cuniculus could be discovered. By the use of a magnifying glass, however, he discovered whitish lines on the summits of the vesicles between the fingers. He therefore cut off the summits of one or two of these vesicles and placed them under the microscope, $\frac{1}{8}$ objective of Oberhauser. On one of these sections he was able to recognise what was undoubtedly the head and anterior parts of an acarus, and thus settle the true nature of the case. Another method of diagnosis which he mentions, but which, from a letter by the late Dr Tillbury Fox which appeared a week or so subsequently in the same periodical, was known and practised both by himself and Continental dermatologists, namely,—collecting the crusts, about as many as would cover a shilling, and placing them in a test-tube with a solution of caustic sodæ, ʒss. of solid hydrate to ℥j. of water, and boiling. In the deposit skeleton acari, eggs, etc., will be found under the microscope. Another device worth mentioning in doubtful cases is to scrape what may appear to be the base of a cuniculus with the point of a lancet, and place the contents under a microscope. Eggs, or other traces of the insect may be detected.

The following three cases will serve to illustrate what I have endeavoured to point out:—

Case 1.—Mrs M. called at my house on the morning of 31st January 1877 with her three children and baby. She stated that they all had some spots on their fingers and hands, and had been scratching themselves a good deal. They had come from the north a few days previously. Their own doctor had said they would soon disappear. On examination I found cuniculated vesicles on the hands of each child, and with a needle and lens had no difficulty in satisfying myself of the presence of acari in each case. The eruption on the abdomen and thighs was also present in each. Appropriate treatment was prescribed, and they were soon well.

Case 2.—J. S., a young lad about 21 years of age, clerk, consulted me in March 1877 about some spots which had been on his hands for some time. He was in the habit of taking a bath every morning, and thought they would soon disappear, but he had not been able to get entirely quit of them. On examination the eruption was certainly very meagre, and in a hurried moment one might have dismissed the case as trifling; but one or two cuniculated vesicles were noted, and two acari produced and placed under the microscope and shown to him, as he seemed rather dubious about the correctness of the diagnosis. On questioning him, he stated that his brother had been in the habit of sleeping with him, and must be suffering from the same disease. He came to me the following day; he was in the same condition. Both were placed under treatment, and soon cured. With regard to both these lads, there is no doubt that their habit of taking a bath daily, and thus keeping their skin scrupulously clean, had done much to keep down the progress of the disease.

Case 3.—J. S., retired shipmaster, 45 years of age, muscular and well built, called on me in November 1877, complaining of an eruption on the hands and forearms. On examination I found an eczematous eruption on the hands and forearms, but no distinctly cuniculated vesicles could be found, and no trace of an acarus, although diligently looked for. My first impression was that the man had got scabies, so like was the eruption, and I felt a little disappointed, as I thought, at being unable to demonstrate it. On further questioning he told me that he had had an attack of hæmatemesis some two months previously. The digestive organs were out of order, and the eruption seemed evidently due to malassimilation. I prescribed for him a mixture containing nitro-muriatic acid in a gentian infusion internally, and told him to wash his hands and arms frequently with water rendered alkaline by sodæ bi carb. Under this he soon got better of his eruption, and his general health improved considerably. I saw nothing more of him till 13th April 1879. He had been in London for two months, had been very irregular and much worried about business matters, and the old eruption had appeared a second time. He consulted a specialist in London, who pronounced it scabies. He did not feel satisfied, and questioned its accuracy on the ground of the nature of the previous attack, but was at once silenced by the expression, "We know here." Sulphur ointment externally and camphor mixture internally were prescribed for him, but matters were worse instead of better.

I questioned the accuracy of the diagnosis, and told my patient that, notwithstanding the deservedly high reputation of the gentleman he had consulted, like other fallible mortals, he had made a mistake. On this occasion, however, the eruption proved very intractable; and as he had lost flesh, and symptoms of malignant disease were beginning to show themselves, he was sent to the country in June, and remained all that month. The eruption disappeared almost spontaneously about a fortnight after he went to the country, but he gradually lost flesh, came home in the beginning of July, lingered six weeks, and died from malignant disease of the stomach. The eruption never showed itself again. In this case, had our London brother been a little more accurate and careful, both myself and my patient would have been saved much worry and annoyance.

*Treatment.*—When once properly recognised, the treatment of scabies is in most cases simple and satisfactory. The first point to be attended to is, of course, isolation of the patient and all his belongings. Then some external application to destroy the insect must be used. There are many preparations that will do this, and consequently cure the disease. Almost every specialist seems to have his own favourite ointment or lotion. Sir Robert Christison is in the habit of using a lotion of chloride of lime, one to forty or sixty parts, and applied five or six times a day, or continuously with wet cloths. The case is generally cured in eight days. Hardy uses a sulpho alkaline ointment composed of carbonate of potass, sulphur, and lard. Dr M'Call Anderson prefers using styrax ointment, which he says "is clean-looking, has a pleasant aroma, and soothes rather than irritates the skin." Erasmus Wilson uses the old sulphur ointment, and I think with the profession generally it is the remedy that is most extensively used. I am generally in the habit of directing my patient to have first a warm bath in the evening, using soap and water freely; then, after being dried, to have the sulphur ointment well rubbed into the skin all over the body, but paying particular attention to the clefts of the fingers, wrists, and forearms—in fact, where the eruption is generally found,—the head and face, of course, are excepted; then to go to bed in this state, and in the morning have a second bath to wash it all off and clean the skin.

In many cases this is sufficient, but, if necessary, it may be repeated a second or third time after an interval of one or two nights. I have never seen this treatment fail, and therefore very seldom use any other. The chief objection to it is its rendering the exhalation from the body very offensive; but if used legitimately, and as I have described, this happens only in a very slight degree. This condition is chiefly the result of excessive use of the remedy.

A preparation of sulphur and lime is used very much in hospitals and schools. It has the advantage that a single application is sufficient. This is true; but from what I have seen myself it has some serious disadvantages. It is very irritating, and always leaves the skin in a very rough, scaly condition, almost like pityriasis, and in severe cases of scabies, where the hands are pustular, although curing, it generally causes an inflamed condition of the skin often more difficult to cure than the original disease. In private practice, therefore, I never think of using it, and even in public institutions I would not be inclined to make it the regular remedy. The late Professor Bennett used to recommend the use of simple lard, simply smearing the body all over with it so as to smother the insects. In very young children I generally do this, but after the age of four or five years prefer using a specific.

## ARTICLE V.—*Notes on the Fever which attacked the Army of Occupation in Cyprus*, 1878 to 1879. By OSWALD G. WOOD, M.B., Surgeon, Army Medical Department.

ABOUT the middle of July 1878 an expedition, consisting of several regiments of the Native Indian contingent, two batteries of artillery, and three British regiments of the line, left Malta for Cyprus, and were encamped on a vast plain near Larnaca. Thence they were moved to various parts of the island in search of a sanitarium. The great sickness and invaliding which occurred are well known, and were much commented on at the time. The following account of the fever, written mostly in the spring of 1879, may prove interesting at a time when attention is again being directed to affairs in this part of the world.

Cyprus is a malarious island, and the fever which prevailed, and still to some extent does prevail, is of malarious origin. It is not confined to one part of the island, but is met with in every district; nor is it peculiar to one time of year. It is most common in summer and in the plains, but it also occurs, though rarely, in winter and at altitudes many hundred feet above the level of the sea.

In type it is remittent, tending to pass into intermittent; while some cases, though distinctly of a malarial nature, present more of the symptoms of a continued fever. In the summer to which I especially refer the attack was sudden and the symptoms severe, but the duration of the acute disease was rarely longer than from five to eight days; while in winter there were often distinct prodromata, the symptoms assumed somewhat of a typhoid character, and the disease extended over weeks instead of days.

The exciting causes, leaving out of consideration the peculiar circumstances of the expedition, such as the single circular tents and the position of the camp, situated as it was on a plain composed of rich alluvial soil, and within a few miles of a notorious salt-marsh, were numerous. Any circumstance which tends to deteriorate the general health may induce fever, such as exposure to the sun (insomuch that an ordinary case of febricula may run into a well-marked periodic fever) or undue fatigue, mental as well as physical, an insufficient or unwholesome dietary, or, above all, exposure to chills. I think I do not exaggerate when I say, that in seven cases out of ten the cause of the illness at Chiflik Pasha camp might have been traced not to the heat, not to overwork, but to the temptingly delicious cool nights following the intensely hot summer days. Much has been said about the sickness having been in a great measure caused by the incautious use of fruit. Now, I am not aware of a single case which will give so much as a shade of colour to this hypothesis. The diarrhœa from which almost every one suffered more or less during the hot season occurred alike whether fruit was eaten or not. It was quite painless, the stools were highly bilious, and it was evidently an effort of nature to get rid of the excess of bile secreted by the liver under the stimulus of the extreme heat and the constant exposure to the sun. Another misconception which has arisen, and which is, I think, worthy of contradiction, is that the reason why the 42d and 101st regiments suffered more than the 71st is because the 42d had so recently been in Ashanti while the 101st was an old Indian regiment, and hence that in them there were more men already obnoxious to malarial influences than in the other one. Now, the proportion of men in the 42d who had served on the Gold Coast was comparatively small, and, as a rule, such men did not suffer as much as the younger soldiers who had never served abroad except in Malta. As to the 101st, that regiment left India much about the same time as the 71st. What I believe to be the true reason of the difference is, that the older and more seasoned soldiers scarcely suffered at all, while the younger lads with only half-formed constitutions readily fell victims to the climate; and the proportion of such seasoned soldiers was larger in the 71st than in either of the other two corps.

The period of incubation of the fever varied greatly, but apparently about a fortnight was the commonest duration.

The symptoms and course of the majority of the cases which occurred during the summer were as follow:—

The patient awoke in the morning with a slight, painless, watery diarrhœa. In many cases this premonitory symptom was absent, or replaced by constipation. In the course of the day, generally about 11 A.M. or between four and five o'clock P.M., severe headache supervened. This was frequently accompanied by rigors, and still more frequently by vomiting, large quantities of bile being often thrown off the stomach. The headache became intense, severe pains in the back and loins were complained of, and aching in all the limbs and bones, together with great muscular debility and intolerance of light and noise. Occasionally this stage was replaced by coma, more rarely by convulsions. The second stage was often of very long duration, not unfrequently lasting over thirty-six hours. In it all the febrile symptoms were intensified, the clinical thermometer showing a high temperature. In one case, a man of the 42d Highlanders, it registered as high as 108° F. The pulse was full and bounding, the skin dry and burning, the face often much flushed, and the conjunctivæ injected, and occasionally tinged with yellow. In many of the sthenic cases there were repeated attacks of epistaxis. In some cases the lips were swollen, and an herpetic eruption covered the lower one. The tongue was covered with a creamy fur, only in very severe or prolonged cases becoming dry or brown. When the vomiting continued in this stage it usually consisted merely of ingesta, and was generally caused more by the enormous draughts of cold water which the patient in his feverish thirst persisted in swallowing than by any remarkable irritability of the stomach. The most usual condition of the bowels was that of constipation, but this often alternated with diarrhœa. The spleen was always much enlarged, and frequently the liver also; and in a few cases albumen was found in the urine. There was either great restlessness and anxiety of mind, or else complete prostration of all the powers both of mind and body, culminating in a species of hopeless apathy, in which the patient, having made up his mind and tottered a few steps towards the hospital, would suddenly throw himself down on the ground, regardless of all surrounding circumstances, and refuse to move or assist himself in any way, and in this condition would allow himself to be dragged on to a stretcher and carried off without uttering a word. This latter condition occurred most frequently among the younger soldiers. The older soldiers, by whom I mean those of twelve years' service and upwards, as a rule, did what they could to help themselves. In this stage delirium occasionally supervened. In some few severe and protracted cases a thickness of speech, which did not at first attract much attention, as it used to come on during delirium, but which persisted throughout a considerable portion of convalescence, was observed. It appeared to be due to a labial paresis, but I have never noticed any of the symptoms of ordinary facial paralysis.

The third or sweating stage was rarely absent except in those cases which assumed a continued type. Moreover, it occasionally occurred in men at their duty who complained of nothing but loss of appetite and a slight feeling of general malaise, but who, on awaking in the morning, would find their bed-clothes saturated with perspiration. The duration and intensity of this stage varied very greatly. The milder the case the greater the sweating, and the more marked the remission which followed it.

The duration of the remission varied as much as the three stages of the fever. The patient could usually tell the hour at which he expected it, though not so accurately as the time of an expected exacerbation. The cessation of the fever was usually abrupt, and sometimes, on coming in the morning to a patient whom you had left the previous evening with a temperature of 104° to 105°, you would find him quite apyretic, with a temperature of 96° or 97°, free from headache, and with a clear, collected mind, but very weak and prostrate and disposed to sleep.

In the few fatal cases I had the opportunity of seeing death was due to cerebral complications.

After a first or even a second attack convalescence was usually rapid: but after three or four recurrences a condition of great general debility and anæmia remained, presenting many of the appearances of scurvy, pale and bleeding gums, often with loosening of the teeth, and a tendency to epistaxis on slight provocation, which, together with a waxy complexion and persistent enlargement of the spleen and pain in that organ, formed such conspicuous features in nearly all the invalids sent home to Netley, and in so many of the men who remained in Cyprus.

Recurrences of the fever—often called relapses, whether rightly or wrongly I will not pretend to say—were common. I believe there is a popular native belief that it tends to recur monthly for three or four months after the first attack. I have seen a similar opinion propounded in a non-professional work (*On Syria and Egypt, from the letters of the late Consul-General Barker*, 1837), namely, that if one is attacked with Cyprus fever in summer or autumn he will be liable to monthly recurrences until the following spring. Dr Heidenstam of Larnaca asserts that the date of recurrence is accurately governed by the number 7 or its multiple. In my necessarily limited experience I have been unable to trace, except in one exceptional case, accurate 7, 14, 21, or 28 days' recurrences; but there was an undeniable tendency to monthly relapses, which might, on closer and stricter investigation, have proved to be exactly four weeks.

So much for the fever as observed in summer and the early part of autumn. As the days gradually got cooler the type of fever changed somewhat. Ague began to prevail, or a hybrid between intermittent and remittent fevers. But when the winter fairly set in the cases which occurred, though fewer in number, presented new and sometimes formidable symptoms, with many startling points of resemblance to enteric fever, for which disease they might well have been mistaken but for the careful use of the clinical thermometer.[1]

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[1] I am somewhat inclined to believe that these were examples of the "enteric fever of malarial origin" described by Sir Joseph Fayrer in his address to the Epidemiological Society.

The following is a general description of these cases:—

In many, especially in men who had not previously suffered from fever in the island, there were distinct prodromata, consisting of headache, loss of appetite, languor, and frequently heavy night sweats. These symptoms lasted for a longer or shorter time, and the patient usually applied for medical advice as feeling "too weak" to perform his duties. Rigors were sometimes present, sometimes absent. In other cases the disease commenced suddenly. The patient may have felt a little out of sorts on rising in the morning, but ascribed the feeling to "biliousness," and probably took a purgative. Suddenly he was seized with headache and vomiting, generally with shivering also, but this symptom was usually elicited only on direct inquiry. The tongue was found to be fairly clean, but of a creamy colour, and the pulse but little altered from the normal. The thermometer, however, when placed under the tongue, registered 102° Fahr. or upwards. After this both varieties of cases ran a somewhat similar course. The symptoms were monotonous, and were those of a continued fever The thermometer at first showed a difference of from one to two degrees between the morning and evening temperatures. There was either constipation or diarrhœa, the stools in the latter case being of a dark bilious character, streaked with green, and very offensive. In some cases, almost from the very outset of the disease there appeared a rose-coloured eruption, sometimes confined to a few spots, at other times scattered over the entire abdomen and chest. These spots did not come out in crops, fading and being replaced by fresh ones, but often persisted for a considerable time, and then disappeared entirely. If diarrhœa were present, tympanitis was common also, and sometimes tenderness on pressure over the abdomen generally, and more particularly over the right iliac region. This symptom, which I believe was often exaggerated, owing to the care with which it was always sought, was by no means constant, and usually disappeared with the diarrhœa. The spleen was considerably enlarged, and the liver usually in a slighter degree. In some of the cases albumen appeared in the urine, and there was almost invariably a copious deposit of pink urates. The headache seldom persisted long. Occasionally, though rarely, there was delirium. The course of the temperature was often highly irregular, and occasionally a man with a high evening temperature was found declaring that he felt quite well, was taking his food with an appetite, sleeping well at night, and complaining of nothing but great muscular debility. In the course of some of the cases attacks of genuine ague occurred from time to time. Throughout the entire illness the patient seldom presented the "enteric facies," and very rarely did the tongue tend to become dry, red, or fissured, though the thick creamy fur occasionally assumed a black appearance. The disease generally lasted over several weeks, and was, as a rule, unattended by any complications. Convalescence, once established, was rapid and unbroken, and there was little or no tendency to loss of the hair during recovery. The temperature was usually very low after the disappearance of the febrile symptoms, the evening temperature (generally about or a little below normal) being about 1° or 1°·5 above that of the morning. The exhibition of quinine during the disease was not the cause of this low temperature, as the same condition obtained in patients who had long discontinued the use of that drug or had never taken it all.

Relapses or recurrences of this form of the fever were very uncommon.

The prognosis as concerned *life* was extremely favourable, the most unpromising-looking cases recovering under proper treatment and good nursing. What we dreaded most were cerebral complications; but even when they occurred hope was by no means abandoned. I doubt if there is any fever whose prognosis as to life is so favourable as the malarial fevers in Cyprus. Prognosis as to absolute recovery is another question. The great liability to, and obstinate persistence of, recurrences of the summer fever in spite of treatment, in spite of change of weather, in spite of improvement in personal comfort,—all point to organic lesions which can be repaired only by residence in a non-malarious climate.

The treatment which appeared to be the most successful in relieving the symptoms, particularly in the summer cases, was the immediate administration of an emetic, followed by the free use of quinine, regardless of remissions. The large quantity of bile cleared off the stomach, and the constant request from patients who had already been treated in that manner for a repetition of the treatment, were alone sufficient to justify the use of the emetic. It also hastened reaction when given in the first stage, and, as I can testify by personal experience, afforded great relief to the headache, which was frequently a most distressing symptom. For this last complaint blisters to the temples were most efficacious, and they were frequently begged for by the sufferers themselves.

In some cases which, commencing with two or three attacks of remittent fever, ended in constant attacks of ague, with chronically enlarged and often intensely painful spleens, medicines seemed to lose all effect. Arsenic might be of some temporary avail, but sooner or later everything failed, and then prompt change of climate was essential. In the prolonged winter cases of fever our chief reliance was placed on careful nursing and the treatment of symptoms as they arose, and in my opinion (though not in that of all the medical officers in the island) the free use of quinine tended to ward off complications and to hasten convalescence.

Since the removal of most of the troops concerned in the original expedition from the island, and the adoption of a hill station for a summer encampment, none of the summer fevers above described have occurred, but we have had under treatment several of the typho-malarial type.

The inference to be drawn from the medical experience of this island is simply this, that there was nothing new or alarming, nothing peculiar to the island, in the fever which attacked our troops. Any tropical climate under the same disadvantageous circumstances would have caused as much sickness and invaliding; and in all probability, had the matter not been taken up as a political question, little would have been heard outside the Army Medical Department annual reports of the illness to which popular fallacy has appended the name of Cyprus.

## ARTICLE VI.—*Notes of Cases of Erysipelas occurring during an Epidemic in the Winter* 1879-80, *and Treated in the old Royal Infirmary.* By Dr A. G. MILLER.[1]

(*Read before the Medico-Chirurgical Society of Edinburgh*, *7th April* 1880.)

THERE were admitted, from the 2d November 1879 to 29th January 1880, 20 cases of erysipelas. Of these 9 were severe, and 4 ended fatally—this demonstrating the severe type of the epidemic. Of those that recovered, 1 was fifty-three days in hospital, having had several attacks; 1 was thirty-two, on account of extensive sloughing; 1 thirty days, on account of several abscesses. The milder uncomplicated cases were about ten days in hospital on an average.

As regards the types of the disease manifested in this epidemic, there were three distinct varieties—1. Erysipelas simplex, 11 cases; 2. Phlegmonous erysipelas, 3 cases; 3. Gangrenous erysipelas, 6 cases. Of the last all exhibited sloughs on admission, and 4 died.

Most of the severe cases had a history of intemperance, and in several the occurrence of the erysipelas might be distinctly traced to alcoholic excess, especially those cases that came in after the New Year.

A remarkable fact was the tendency to relapse exhibited in 6 cases, 4 having one relapse, 1 two, and 1 five. On almost every occasion the fresh attack could be traced to infection from a newly-admitted patient. In some instances I think that the infection was apparently assisted by the formation of a raw surface, as in opening an abscess, making a counter opening, or grafting.

On account of this tendency exhibited to relapse, I administered antiseptics internally, with the view of exerting a prophylactic action. The first remedy employed was the sulpho-carbolate of soda, in doses ranging from 20 grains three times a day to 30 grains every few hours. Unfortunately I have not sufficiently accurate notes to go by, and also I think the remedy was not sufficiently pushed. But my opinion is that the sulpho-carbolate of soda was undoubtedly useful. Certainly it did no harm. Eight patients got the medicine. (It was administered only after the tendency to relapse had been manifested). Four of these recovered in from six to thirteen days without any relapse. One case got the sulpho-carbolate after a relapse—had no other attack, and left on the fourteenth day after admission. Two cases had each a very slight relapse after getting the sulpho-carbolate, but recovered rapidly. The last case was the man who had several relapses; but he seemed to have developed a special proclivity for taking the erysipelas. The wards seemed to have become saturated with the poison, and I believe he would have gone on having fresh attacks till he died had he not been removed. In his case I think the sulpho-carbolate was not sufficiently pushed. After removal to another ward he recovered rapidly and completely.

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[1] The first part of this paper, containing the histories of the cases, is left out for the sake of brevity.

Another antiseptic tried was a solution of quinine and carbolate of glycerine, in the proportions of 5 grains of quinine, ♏j. of liquid carbolic acid, and ♏iv. of glycerine (with sufficient sulphuric acid to dissolve the quinine) to ℥j. aq. in each dose. This mixture was given only to the worst cases, where there was very high temperature and much offensive discharge. With regard to the effects of this remedy I can again speak only generally.

1. There was undoubtedly a marked diminution in the quantity, character, and offensiveness of the discharges. They became less fœtid and more decidedly purulent (less watery).

2. Both the temperature and pulse were lowered. This was not due to the quinine alone, for the effect of the mixture was more marked than when the same quantity of quinine was given alone. This was noticed by several besides myself, and was particularly tested in the case of Margaret Robertson.

3. But, unfortunately, at the same time there was evidenced a markedly irritant action of the carbolate—so marked as, in my opinion, to make this a dangerous remedy unless very carefully watched.

The irritant effects were observed on the stomach, bladder, and even peritoneum. Renal irritation with smoky urine was not exhibited. The direct cause of the irritation was demonstrated by stopping the quinine carbolate when the symptoms disappeared, and giving it again when they were reproduced. The general treatment which was given to all the cases on admission was a sharp purge (usually mercurial), milk diet, and liq. ferri perchlor. Locally, flour and cotton wadding, with the support of a bandage if possible. The effect of this treatment on the milder cases was manifested in a few hours invariably. The severe headache disappeared; the foul tongue cleaned; the nausea gave place to a little appetite. Locally, the redness and tension abated, and this was evidenced by wrinkling of the skin, which before had been tense and glistening.

In the worst cases, I am afraid to say whether treatment had any marked beneficial effect. There was generally a temporary improvement after treatment was commenced or altered; but the disease seemed to run a special course whatever was done, just as a case of typhus or scarlet fever would do.

In regard to surgical interference, what I aimed at was to relieve tension, evacuate collections (whether purulent or sero-purulent), maintain drainage, and support the parts to prevent gaping and favour early contraction. To effect the last object the dressing applied was usually the many-tailed bandage of wetted lint, which I first learned to use when under Professor Spence. The lint was either boracic dipped in warm water, or plain lint dipped in carbolic lotion, 1–40 or 50. Once or twice I used (where discharge was offensive) boracic lint dipped in carbolic lotion; but this produced irritation, and had to be discontinued.

One or two of the cases had special points of interest in them. For instance, Lawson, the sailor, who was sent in with a glandular abscess in the axilla, remained six days in hospital, and did not take infection. His wound was treated antiseptically. While he was in the ward, two cases of erysipelas (phlegmonous) were beside him, a case of erysipelas simplex was admitted, and he lay in the bed (of course, not the bedding) in which Gow had died three days before.

In the case of Charles Brown we have an instance of an abscess of the scalp of large size being opened antiseptically and remaining perfectly sweet, and the patient free from all infection, while lying beside three cases of erysipelas, one of them of a very severe type, which ended fatally.

I shall now refer to the fatal cases. They were all instances of what I heard recently for the first time, and very appropriately, described by Professor Spence as gangrenous erysipelas. In each there were cutaneous sloughs of a dark (almost black) colour present on admission. In each there was a low state of the constitution, and what used to be termed a typhoid or asthenic type of the inflammatory process. In most there was a history of previous intemperance. In each case I had the advantage of a consultation with my medical colleagues, Drs Wyllie and Affleck.

The first fatal case—that of John Gow—gave no chance to treatment. The erysipelas, on his admission, had extended over the whole left arm and shoulder, and had passed down the left side as far as the crest of the ilium, extending almost to the mesial line both anteriorly and posteriorly. Besides this, there were several sloughs already formed upon the arm and thoracic walls. He survived his admission only a few hours.

The second fatal case was that of James Hoggan. He was an old man (æt. 60) of broken-down constitution, intemperate, and very desponding. He several times seemed to improve under treatment, but always relapsed, a fresh accession and spread of the erysipelas and sloughing taking place. The erysipelas affected the right thigh, extending from the knee to the sacrum, and ultimately across to the opposite side. There was extensive sloughing from the first, and great undermining of the skin, caused by sloughing of the cellular tissue. At one time granulation seemed to have been well established, and I would have amputated at the hip but for the extensive undermining of the skin on the hip and sacrum. A very remarkable fact in this case was that the man had an attack of simple erysipelas of the face, which ran its course in an ordinary manner while the gangrenous affection existed on the thigh. In this case the effect of incisions was always beneficial at first, probably by relieving tension, but afterwards they caused irritation and depression. I believe that it would have been greatly to the benefit of the patient had it been possible to have made the incisions antiseptically.

The third fatal case was that of Donald Cameron. This patient, like the former one, was a drunkard, and had a shattered constitution. On admission he had a slough on the back of the hand—the erysipelas having resulted from an injury to one of his fingers. He was admitted on the 10th of January, and had been drinking hard from the New Year. He had a severe and prolonged attack of delirium tremens, in prescribing for which I had the kind assistance of Dr Affleck. The erysipelas extended upwards as far as the shoulder, and several sloughs formed. After he had been a fortnight under treatment, the sloughs having almost entirely separated, granulation having been established of a healthy character, and contraction having begun, everything seemed to promise a satisfactory recovery, when one morning a tendency to haemorrhage was shown, and at the same time the granulations altered their character, becoming dark-coloured and gray in places, sloughing also threatening again. The arm was amputated a little below the shoulder, as low down as it was possible to obtain flaps. The patient did well for five days, the stump partially healing; but on the sixth day he had a rigor, became delirious, sank rapidly, and died on the 4th February, nine days after the amputation. The temperature chart showed a rise to 102°·6 the day of the first haemorrhage, a fall to normal after the amputation, but a rise to 102° on the sixth day, and to 105° on the day of his death.

The last of the fatal cases terminated on the same day as the above case. William Adamson was not admitted into the Hospital, as he did not seem very seriously ill at first, and I did not wish to crowd many putrid cases together in one ward. His case is interesting mainly on account of the cause of death. He had gangrenous erysipelas of the left arm, which was doing well till two days before his death, when he complained of weakness and inability to attend the Hospital, he having previously attended daily to have his arm dressed. The gentleman then acting as my clerk visited him at his house, and reported to me that he died suddenly on the 4th February after an attack of breathlessness — probably from heart disease and œdema of the lungs.

Remarks on the pathology of erysipelas which have been suggested to me by what I have observed during the treatment of the above recorded cases:—

1*st*, Erysipelas is a blood disease, and not only so, but is accompanied by an altered condition of the blood and bloodvessels. This I consider was manifested by the following appearances (among others):—(1.) An engorged condition of the bloodvessels; (2.) A tendency to hæmorrhage, incision being always followed by copious bleeding, the blood flowing in a continuous and free current; (3.) A want of tone in the vessels, and possibly a want of coagulating power in the blood, for there was little or no tendency to the natural arrest of the bleeding, which continued till pressure was applied; (4.) A dark, congested character of the cutaneous sloughs; (5.) Lastly, the very marked beneficial effect produced on the milder cases by a sharp purge, which probably acted by relieving the congestion of the vascular system. All these points mentioned indicate an altered and vitiated condition of the blood and bloodvessels.

2*d*, The close connexion evidenced between gangrenous erysipelas and alcoholic excess may perhaps throw some light on the subject. We know that alcohol dilates the minuter bloodvessels, and that its persistent abuse causes permanent dilatation of these vessels. Among the vessels thus permanently damaged will be the vasa vasorum. Consequently the vascular system must doubly suffer from alcoholic indulgence. If this be the case, it is natural that the tissues which are more immediately dependent on the smaller bloodvessels—that is to say, which have none but small vessels near them—viz., the skin and cellular tissue, will be most liable to congestion and to gangrene. And we would naturally suppose that a slough thus forming would be dark-coloured, just as it was in the above recorded cases.

3*d*, Another pathological point to which I would refer is the modus operandi of the poison or virus of erysipelas. It cannot act as some suppose the poison of syphilis does, viz., by preying on a certain food which it finds in the system, and gradually exhausting itself as this pabulum is eaten up. The cases I have recorded of repeated attacks prove that this cannot be true of the erysipelas poison, else whence the relapses?

In view of the intimate connexion (as cause and effect) between alcohol and erysipelas and many other fatal diseases, it seems to me a great pity, to say the least, that more effort is not put forth to prevent the undue indulgence in this dangerous substance which we see everywhere around us. Were any other drug as frequently the cause of death, its sale would be suppressed by law, instead of licensed.

## ARTICLE VII.—*A Note on Surgical Statistics.* By JOSEPH BELL, Surgeon to the Royal Infirmary.

IN closing the winter course of lectures on clinical surgery, Mr Joseph Bell read the following list of all the operations performed by him in hospital during the five months of the session, 103 in number, and gave the following brief account of the three fatal cases, as illustrative of the difficulty often found in making statistics of death or recovery bear a practical value.

The three fatal cases were really in no way connected with or dependent on the operation. The first, a case of strangulated hernia, was in a very fat infant of five months old, operated on in the usual way for a recent hernia, in which the condition of the bowel was excellent. The night was extremely cold. The child had been carried twice to the doctor's house, and afterwards to the Infirmary. It had been put under chloroform three times, first by the doctor in whose care it was, secondly by the house-surgeon for the taxis, and thirdly by myself for the operation, which was done about 11 P.M. Its breathing was by that time embarrassed. Acute bronchitis came on through the night, at noon it was moribund, and it died at 5 P.M., without a single symptom referable either to the hernia or to the operation for its relief.

The second case was that of amputation of the penis by the thermo-cautery in an old drunkard. The wound was just healed, and the patient was to go out, when he caught cold by undue and reckless exposure in the passages, and died of acute broncho-pneumonia.

The third was in a man of 50, who by a railway accident sustained a most complicated series of injuries—fracture of left thigh in two places, one in the knee-joint, fracture of right tibia and fibula comminuted, with laceration of vessels, bruises of back, hips, and shoulders to such an extent that gangrene supervened, involving the right leg. As a last resource, and with little hope of his coming off the table alive, I amputated in middle third of thigh. He lived a week, and died of gangrenous inflammation of back and nates. The other leg and thigh were also beginning to lose their vitality before his death.

### WINTER SESSION, 1879-80.

*Mr Joseph Bell's Wards, Royal Infirmary.*

Total number of Operations, 103; Deaths, 3.

| | | | | |
|---|---|---|---|---|
| *Amputations* of Thigh, | 6 | For *Hydroceles* of Neck, | | 1 |
| " " Leg, | 2 | " " of Testis, | | 5 |
| " " Foot, | 1 | *Excision of Testicle*, | | 1 |
| " " Arm, | 1 | *Excision of Mamma*, | | 7 |
| " " Fingers and Toes, | 11 | Scirrhus, | 6 | |
| | | Encephaloid, | 1 | |

| | | |
|---|---|---|
| For *Epithelioma*, | | 5 |
| Of Tongue, | 1 | |
| Of Penis, | 2 | |
| Of Lip, | 2 | |
| For *Fistulæ*, | | 7 |
| In Ano, | 2 | |
| In Penis, | 2 | |
| Recto-Vag., | 1 | |
| Lachrymal, | 2 | |
| For *Hare-Lip*, | | 5 |
| Single, | 2 | |
| Double, | 3 | |
| For *Club-Feet*, | | 5 |
| Talipes equinus, | 2 | |
| ,, varus, | 3 | |
| For *Cario-Necrosis*, | | 5 |
| Of Mastoid cells, | 1 | |
| Of Foot, | 4 | |
| For *Necrosis*, | | 3 |
| Of Femur, | 1 | |
| Of Tibia, | 2 | |
| For *Phymosis*, | | 4 |
| For *Nævus*, | | 3 |
| For *Exostosis*, | | 4 |
| Index Finger, | 1 | |
| Great Toe, | 3 | |

| | | |
|---|---|---|
| For *Tumours*, | | 10 |
| Of Upper Jaw, | 1 | |
| Fibrous, | 3 | |
| Fatty, | 3 | |
| Sebaceous, | 2 | |
| Adenoid, | 1 | |
| For *Neurotomy*, | | 1 |
| Of Infra-orbital. | | |
| For *Nerve-stretching*, | | 1 |
| Great sciatic. | | |
| For *Strangulated Hernia*, | | 1 |
| For *Rodent Ulcer*, | | 1 |
| For *Urethral Calculus*, | | 1 |
| For *Parotid Abscess*, | | 1 |
| For *Ununited Fracture*, | | 1 |
| For *Imperforate Anus*, | | 1 |
| For *Ligature of Internal Piles*, | | 3 |
| For *Polypi*, | | 2 |
| Of Ear, | 1 | |
| Of Nose, | 1 | |
| For *Ingrowing Toe-nail*, | | 1 |
| For *Painful Stump*, | | 1 |
| For *Ganglion*, | | 2 |

# Part Second.

## REVIEWS.

### *The Journal of Anatomy and Physiology, Normal and Pathological.* Vol. XIII., 1879. Edited by G. M. Humphry, M.D., F.R.S., Wm. Turner, M.B., F.R.S., J. G. M'Kendrick, M.D., and C. Creighton, M.D. Macmillan & Co.

The last volume of the *Journal of Anatomy and Physiology* contains much that is both of interest and value, not only to the man of science, but to the busy practitioner as well.

The volume opens with a paper from the pen of Dr D. J. Cunningham, which gives promise of a rich harvest, even in mammalian anatomy, when the results of the *Challenger* work are formally given to the world. In The Intrinsic Muscles of the Mammalian Foot, Dr Cunningham points out that, like the manus, the pes has three groups of muscles—1, a plantar layer of adductors; 2, an intermediate layer of flexores breves; and 3, a dorsal layer of abductors. —all of which are well seen in the marsupials.

Dr Cunningham concludes with a glance at the developmental condition of the human foot, which resembles in some of its stages certain permanent forms in the mammalian class.

The Development of the Organ of Corti, and the Case of Hemiplegia from an Injury, involving Loss of Brain, can only be mentioned here. The graphic representation of the Physiological Action of Pilocarpine by means of sphygmograms demonstrates to the eye in a very clear manner the effects of this drug on the circulation.

Drs Coats, Ramsay, and M'Kendrick present the third provisional report of the committee on anæsthetics, which is of much interest, and should lead to the means of saving life. Chloroform and ethidene both lower the blood-pressure, but the former more markedly and more capriciously, while the latter causes a less, and at the same time a more regular, fall of pressure. Chloroform may kill by paralyzing either the circulatory or respiratory nerve-centres, but usually the heart continues its action after the breathing stops, and artificial respiration seldom fails to recover the animals. On no single occasion did ethidene stop either heart or breathing. Ether does not modify blood-pressure.

An important paper for those engaged in the teaching of anatomy is contributed by H. Roger Williams, M.R.C.S., upon the Quadriceps Extensor Muscle of the Thigh. Hitherto it has been customary for anatomists to regard the crureus and the vastus internus as being inseparably united; indeed, in the last edition of Ellis's work upon Practical Anatomy they are described as one muscle. Mr Williams, however, affirms that the vastus internus can in all cases be demonstrated to be quite distinct from the crureus, and when this is done it will be seen to have *no origin* from the internal surface of the shaft of the femur, which is bare in so far as giving rise to muscular fibres is concerned. It seems to us that there is much truth in what Mr Williams asserts. The dissection necessary for the separation of the two muscles, however, is to a great extent artificial, inasmuch as an aponeurosis, which extends in the lower part of the thigh from the surface of the one on to the surface of the other, must be divided. Mr Williams also called attention to a new point in the anatomy of the knee-joint, viz., that the nerve to the sub-crureus muscle gives a small twig to the synovial membrane.

A paper by Dr A. H. Young throws some additional light on the homologies of the sexual organs in the two sexes. In describing the anatomy of the koala, he points out the existence of a well-developed *vesicula prostatica*, the presence of the *utriculus* being now in this paper for the first time determined in the marsupials, in which it appears to be exceptional.

Comparing the koala with other marsupials, Dr Young points out that, with the exception of the *utriculus*, the internal organs are essentially marsupial. He considers that the Weberian organ represents the genital canal formed by the conduits of Müller, whether differentiated into a uterus and vagina or not, and that when, as in marsupials, the Müllerian ducts remain almost if not entirely separate, the *utriculus*, as in the koala, must be regarded as the homologue of the vagina *solely*.

A nut for the believers in localization of function to crack is offered by Dr D. J. Cunningham in his Case of Sub-arachnoid Cyst. This was found in a man of enormous size, whose only disease was diabetes. No motor affection was present, and yet, on opening the head, great destruction of the motor region was found. In the right parietal area there existed a cyst as large as a hen's egg, roofed by the arachnoid, and lined by the pia mater. The part occupied corresponded to the ascending parietal, supra-marginal, angular, and part of the superior temporo-sphenoidal convolutions, all of which, forced out of place, and about the thickness of paper, could be made out. The sero-sanguinolent fluid which escaped had evidently collected over the parietal region and forced its way between the convolutions. On microscopic examination no trace of nerve-cells or fibres could be found in these convolutions. The so-called motor area there was deeply involved, and yet no paresis existed.

Mr D. J. Hamilton's admirable paper on the Process of Healing has already been discussed in these pages, yet a few words may be said with regard to it. Passing over the description of healing by first intention, we may glance at the views given as to granulating wounds. Alas for the granulations! Faith in them as an aid to healing seems to be as thoroughly exploded as trust in "Brown Bess" before an enemy. Mr Hamilton shows that granulations could not arise but for the removal of the skin, which prevents the capillary network beneath from projecting under blood-pressure. When, as in a burn, this is removed, the blood-pressure causes the capillaries to rise in the direction of least resistance, and so form granulations, these being larger when the pressure is greater, *e.g.*, in the dependent leg. Pus is secreted after the formation of granulations, not before. The skin cannot grow until by pressure the granulations are brought into a state of atrophy, either naturally by growth of connective tissue cutting off the blood-pressure, or artificially. Mr Lister's wounds never granulated, and their repair took place without the trouble seen elsewhere. In the cornea, also, an unvascular tissue, healing of wounds takes place sooner than anywhere else. The whole process is an embryonic growth of like from like.

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*Twenty-First Annual Report of the General Board of Commissioners in Lunacy for Scotland.* Edinburgh: 1879.

As it appears from the title that the General Board of Commissioners in Lunacy are commanded by Her Majesty to present a report to both Houses of Parliament about the condition of lunatics in this northern kingdom, of course the thing must be done. Both the Peers and Commons would no doubt complain if they missed their accustomed annual treat. But we others, who, not being legislators, are not so ready to peruse the report, ought at least to look with kindly consideration upon those who have year after year to go through the task of writing on the same subject, and filling in similar figures in the same old forms. What makes the subject worse for literary treatment is that in the past year everything seems to have gone on smoothly in the working of the Lunacy Board. The Commissioners have got no controversies in which to claim a victory, and, as far as we know, no one is at present complaining against them. We see no reason to indulge in any remarks, critical or otherwise, about the report, save that we advise those who write it to keep on trying to condense. It appears that the rapid increase in the number of pauper lunatics which characterized the previous three reports is still going on without any abatement. The Commissioners think this to be no proof of a real increase of the actual number of the insane, but simply an increasing success in the manufacture of pauper lunatics, to which the grant of 4s. a week from the imperial exchequer may be viewed as an additional temptation. It is some confirmation of this view that there is no such increase in the number of private lunatics. Pauper lunatics are now all provided for, and well provided for, in public establishments, while the population of private asylums has slightly decreased. There has been a slight increase in the number both of private and pauper lunatics provided for in private dwellings. The number of insane persons in Scotland known to the Board amounted last year to 9386, of whom 7751 were maintained by parochial rates, and 57 at the expense of the State, while 1578 were maintained from private sources. The increase of lunacy, like the question whether Hamlet was insane, is one with which every medico-psychologist ought to be familiar. The following passage is therefore worthy of attention :—

"Since 1859 the private lunatics registered in England have increased from 4980 in 1859 to 7692 in 1878, or from 25 to 31 per 100,000 of the population ; and the pauper lunatics have increased from 31,782 in 1859 to 60,846 in 1878, or from 161 to 245 per 100,000 of the population. In Scotland the increase has been, for private lunatics, from 1035 in 1859 to 1468 in 1879, or from 34 to 41 per 100,000 of the population ; and for pauper lunatics, from 4980 in 1859 to 7690 in 1879, or from 164 to 214 per 100,000 of the population. The total increase in England has been, for each 100,000 of the population, from 187 in 1859 to 276 in 1878 ; and in Scotland from 199 in 1859 to 255 in 1879."

The Commissioners have evidently much at heart the abolition of airing courts. They are not even satisfied with them coming into disuse ; all traces of them must be swept away. In one report the

Commissioner remarks that there are no reasons why the walls of a disused airing court should not be pulled down, green banks being substituted to conceal the clothes hung out to dry. As far as our means of knowledge go, no unfortunate results have arisen from the disuse of airing courts: the number of escapes does not seem to be greater; and the increased expense of attendants has not become formidable. There are always cases in a large asylum which had much better be in an airing court than hauled about the grounds; and although it may be granted that airing courts were too much used, this does not prove that they are never useful. We learn from the report that the board of pauper lunatics in the royal asylums ranges from £22 to £32 a year, and in the district asylums from £23 to £28.

The District Board of Lanarkshire have bought the private asylum at Kirklands, Bothwell, and the General Board expect that it will be converted into an institution for imbeciles and idiots, both juveniles and adults, as soon as the necessary district asylum accommodation has been provided.

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*The Riviera: Sketches of the Health-Resorts of the North Mediterranean Coast of France and Italy, from Hyères to Spezia, with Chapters on the General Meteorology of the District, its Medical Aspect and Value, etc.* By EDWARD J. SPARKS, M.A., B.M. Oxon., Fellow of the Royal College of Physicians. London: J. & A. Churchill, New Burlington Street: 1879.

THIS is a small octavo of 403 pages, and the title-page gives a good idea of its contents. The author, having been constrained by the state of his own health to go abroad for some years, and having spent the last four of these in the Riviera, is able to write from observation and personal experience, and his opinions may therefore be received with confidence. He has spared no pains in making his book as comprehensive and accurate as possible, and appears to be guided by an extensive knowledge of his profession, freedom from prejudice, and an earnest desire to be useful to all who are in like circumstances with himself. Our limits prevent us from entering upon details; we can only direct attention to a few points which have impressed us, in perusing his pages, as specially deserving of attention.

It is worth bearing in mind that the mean temperature of the Riviera in winter and spring is from *eight* to *ten* degrees higher than that of England, and that in midwinter the day of actual sunshine is longer.

Compared with Great Britain, or even the north of France, the Riviera has a very dry climate. Although in autumn and also in spring there are occasionally three or four successive wet days, on which torrents of rain fall, and the total rainfall is not much inferior to that of the west of England, yet, taken as a whole, the number of fine days is immensely greater, both in summer and winter, than in almost any other part of Europe.

These outstanding characteristics of the Riviera render it an inviting climate for delicate people, permitting them to be much in the open air at seasons when that would be dangerous in their own country. But the picture has another side.

These health-resorts are virtually closed against those whose pecuniary means are moderate. Private residences or villas are very expensive ; servants of the right sort are difficult to procure ; the comforts, the necessaries of life, even, are dear ; and it is not at all unlikely that the sanitary condition of the residence will be far from satisfactory. The hotels are exempt from some of these drawbacks ; but in them you have less independence, less quietness, less ample accommodation. Instead of a large airy bedroom,—if expense needs to be considered,—you have probably a small stuffy chamber at the top of a long stair ; instead of a comfortable drawing-room in the evening, you find yourself in a noisy *salon*, over the due ventilation of which you have no control. These are a few considerations to be placed in the balance with the comforts of home, besides the inevitable inconvenience and fatigue of a long journey at a late season of the year, when weather is no longer to be depended on.

Dr Sparks brings all the *pros* and *cons* fairly before his reader ; but, judging by his own procedure, he is evidently in favour of giving a thorough trial to the Riviera for several winters in succession. He deprecates a too early departure in spring—advising his patients to remain until the middle of May before venturing on the uncertainties of our English climate.

The various health-resorts betwixt Hyères in the west and Spezia in the east are discussed in succession and compared.

We recommend the book as, so far as we can judge, a safe and reliable guide.

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## *Journal of the Scottish Meteorological Society.* New Series, Nos. LV.–LVI. *The Climates of New York and Cyprus.*

We have already had occasion to attract the notice of our readers to a paper by Mr Alexander Buchan, Meteorological Secretary, and Dr Arthur Mitchell, on the influence of weather on different diseases, which appeared in the Society's Journal, vol. iv. p. 187. In this paper, London was selected for the consideration of the influence of the weather upon public health because it had a very large population spread over an area so small as to have one uniform climate, and full weekly reports of its mortality from different diseases. Mr Buchan and Dr Mitchell have again taken up the same subjects, comparing New York with London.

The population of New York, which is not given in the article, is above a million. It is situated on an island, and one-third of its population have been born in different parts of Europe. One-fifth of its inhabitants, indeed, are Irish, living in a climate which is considerably different from their own. The mean annual temperature of New York is 51°·2, and of London 50°·6, being thus nearly the same; but it would be a great delusion to imagine that the climate is the same. The extremes of heat and cold are much greater in the American city.

The special climatological characteristic of New York, as contrasted with that of London, lies in the distribution of the temperature through the months of the year. The mean annual temperature of New York is 51°·2, and of London 50°·6, being thus nearly the same. The monthly means, however, differ greatly. The Julys of New York are 12°·6 hotter, and the Februarys 10°·1 colder, than those of London.

There is another important point of difference between the two climates: while from February to July the increase in the temperature at New York from month to month is 5°·3, 10°·7, 13°·2, 10°·5, and 5°·0, in London the amounts of monthly increase are 1°·6, 6°·7, 5°·5, 6°·4, and 2°·8. Similarly, the monthly rates of fall from July onward are much greater in New York than in London. The mean annual rainfall of New York is 44·35 inches, which is nearly double the rainfall of London; but rainy days are fewer. The authors remark that the relative humidity is much less at New York throughout the year than at London, but why do they not tell us the absolute humidity—the amount of moisture contained in each cubic foot of air? This is, of course, quite different from the relation of the moisture to the saturation of the air, which varies with the temperature. For example, if the thermometer stood at 49° dry and 44° wet bulb, the relative humidity would be 67°; and if it stood at 99° dry and 91° wet bulb, the humidity would still be expressed by 67°: but in the first case the moisture in a cubic foot of air would be 2·7 grains, and in the second case it would be 13 grains. It must be borne in mind that inspired air is raised to the temperature of the body ere it is expelled, and that the amount of moisture in the air alters the radiation of the heat of the earth's surface.

Some of the facts brought out are of considerable interest. The cases of measles both in London and New York show a double maximum through the year. The maxima in New York are in February and July, in London in December and June, so that there is a certain agreement between the prevalence of the exanthema in these two great cities; but scarlet fever has its maximum in New York from December to June, being lowest in September; in London, on the contrary, the maximum is from January to July.

It begins to rise in August, and is highest in October. The curve of mortality from bowel complaints is the most pronounced of all. In New York it rises rapidly in July, and commences to decline before the end of that month. In London it is highest in the middle of July to the middle of August. In New York the death-rate from bowel complaints is greater as the summer is hotter, and phthisis is the most fatal of diseases, causing one-seventh of the whole mortality, in London one-eighth. Sunstroke is common in New York during the hotter months. In 1872 and 1876, when the summer heat was excessive, there were as many as 320 and 260 deaths. Suicide is commonest during the warmest months both in London and New York.

The broad fact which the two diagrams disclose is that the New York curve receives its leading characteristics from a great fatality there of diseases which have their maxima as causes of death in the hot months (diseases of the abdominal organs), and that the London curve receives its form from a comparatively lower fatality of such diseases, and a comparatively higher fatality of the diseases which have their maxima as causes of death in the winter and spring months (diseases of the respiratory organs and of the nervous centres).

The range of the death-rate is in the great majority of cases considerably larger in New York than in London.

The second article in the Journal is on the climate of Cyprus, from observations made by Thomas B. Sandwith, H.M. Vice-Consul, from October 1866 to June 1870, by Alexander Buchan, Meteorological Secretary. As this is a matter which has excited much discussion, we give the summary.

"The winter climate of Cyprus, extending from November to April, is exceptionally good for two reasons. Its mean temperature ranges from 52°·8 to 60°·9, being the limits of temperature between which deaths from diseases of the respiratory organs and from bowel complaints are either at the minimum or comparatively small. Secondly, the lowest temperature noted during four years was 36°·1, and the temperature seldom falls below 40°·0, and hence the winter climate of Cyprus is singularly free from the discomfort and positive injuriousness to the health inseparable from temperatures ranging from 40°·0 to 32°·0, and lower. Since, owing to their exposure to the cold dry winds of the mistral and to other causes, the winter climates of North Italy, South France, Spain, and Algiers are characterized by the occasional occurrence of lower temperatures, as well as by a more fluctuating temperature generally than that of Cyprus, it follows that Cyprus presents superior attractions for the establishment of winter sanitaria. It is to be noted, also, that at this season the rainfall is moderate, being not much different in amount from that of London; but it falls much seldomer, three days out of every four being without any rain whatever.

"The summers are, in common with those of the coasts of Algeria, South Italy, South Greece, and South Asia Minor, very hot and rainless, and must, therefore, be exposed to an increased unhealthiness and mortality from bowel complaints and other diseases incident to climates where the mean temperature reaches 81°·5. But Cyprus presents in its varied surface, which rises to heights of several thousand feet, culminating in Mount Olympus, 6590 feet above the sea, admirable facilities for the establishment of summer sanitaria among the mountains, just as has been done in India among the Himalayas and Neilgherry Hills. Though we have no definite information regarding the summer climates of the higher regions of Cyprus, there can be no doubt, reasoning from the meteorology of the Caucasus, and from remarks scattered through Mr Sandwith's meteorological journals, that in addition to a lower temperature, due simply to a greater height, showers of rain, with and without thunder, are not of unfrequent occurrence among the mountains of Cyprus in summer.

"It must be clearly understood that in the above remarks reference has been made to atmospheric conditions alone as affecting the healthiness or unhealthiness of the climate. There are, it is scarcely necessary to say, other conditions affecting the health of a country than merely atmospheric conditions. These, in a country like Cyprus, are the malarious and other noxious elements which find their way into the atmosphere from lands once cultivated, but now allowed to lie uncultivated, and from lands where the drainage is more or less defective."

We hope that these two distinguished meteorologists will continue their important researches, which deserve the thanks of all interested in public health, presenting as they do a large amount of information in a small compass.

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*Medicinal Plants: being Descriptions, with Original Figures, of the Principal Plants employed in Medicine, and an Account of their Properties and Uses.* By ROBERT BENTLEY, F.L.S., Professor of Botany in King's College, Professor of Botany and Materia Medica to the Pharmaceutical Society of Great Britain, etc., etc.; and HENRY TRIMEN, M.B., F.L.S., Department of Botany, British Museum, etc., etc. London: J. & A. Churchill: 1880.

THIS important work has now been completed. It has been published in "Parts," and we have from time to time noticed these in our pages.

It is fully four years since the work was commenced, and we are glad to be able to congratulate the authors on the completion of their *Medicinal Plants*—a work which will henceforth be recognised as one of the most important on vegetable materia medica. It is published in 42 parts, and forms four volumes. It contains coloured drawings of 306 medicinal plants, together with their botanical characters and their actions and uses. Of these 264 belong to the *Dicotyledones*, 34 to the *Monocotyledones*, and 8 to the *Cryptogamia.* The authors have figured and described all the plants referred to in the *British Pharmacopœia*, and most of the plants officinal in the *Pharmacopœias* of the United States and of India.

"The text of each plant is divided into two portions, the first devoted to the description of the species, its localities, and other purely botanical matter; the second to the general characters, composition, properties, and uses of its parts or products which are employed in medicine or otherwise." In footnotes are given the derivation, so far as can be ascertained, of the generic, and, when necessary, of the specific name. A very interesting paragraph is devoted to the quotation of *figures* of the plants. Of every plant there is given an excellent description, for the most part in strictly scientific language. These descriptions were generally given from living or dried specimens. There is also given a very interesting description of the geographical distribution, cultivation, and time of flowering of each plant. The authors give a notice of the *collection, preparation,* and *commerce* of the various drugs, and also a good account of their chemical composition. The book also contains much useful information on the *adulterations* and *substitutions* of medicine. The last part is devoted to the *medicinal properties and uses* of the various drugs. The *plates*, on the whole, are very good. When dealing with upwards of 300 plates, it would be easy to find fault with individual ones; but generally they are well executed, and serve to convey an accurate idea of the plant. The plates are all coloured, and in many cases are double. At the conclusion of the text of each plant a description of the plate is given, and in every case the source whence the specimen figured was obtained. We again express the opinion which we have expressed on a former occasion when noticing this work, that it would have been better if the description of the plates had been given at the beginning, and not at the end of the text. The work contains, in connexion with each plant, a list of the various authorities who have written concerning that particular plant.

The work contains also a "Systematic List of Contents," in which the various plants are arranged according to their Natural Orders, so that the reader can see at a glance the various medicinal plants contained in any Natural Order. There is also a well-arranged index.

We have much pleasure in highly recommending Bentley and Trimen's *Medicinal Plants* to the notice of our readers, and hope it will have a wide circulation. It is an invaluable book as a work of reference, and forms a noble contribution to botanical and medical science.

# Part Third.

## MEETINGS OF SOCIETIES.

## MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

### SESSION LIX.—MEETING VI.

*Wednesday*, 7*th April* 1880.—Dr P. HERON WATSON, *President*, *in the Chair.*

### EXHIBITION OF PATIENTS.

I. *Mr Joseph Bell* showed a boy aged 12, who had been put under his care in hospital by Dr Coldstream of Leith. While running he had sustained a severe stellate fracture of the patella, which caused suppuration of the knee-joint. Mr Bell had laid the joint freely open, with antiseptic precautions, had washed it out, and inserted a large indiarubber drainage-tube. The result has been a perfectly mobile joint, and the patella has soundly healed without deformity.

II. *Dr Wyllie* showed a patient who had suffered from a PAPILLOMATOUS GROWTH in the larynx. The patient was a boy aged 12, and had been first seen by Dr Wyllie seven years ago, in May 1873, when he had been sent for examination by his medical attendant, the late Dr Hardie. He was then five years of age. His illness had begun six months previously with hoarseness of voice, which had been succeeded by complete loss of voice and increasing dyspnœa. For six weeks the dyspnœa had been considerable, and had been especially alarming at night. There had never been any soreness of throat, or pain on deglutition. When the patient was examined with the laryngoscope the dyspnœa was found to be due to the presence in the larynx of extensive papillomatous growths, which grew from the false and true cords on both sides, and produced almost complete occlusion of the glottis. As tracheotomy was evidently required, it was recommended that the patient should be put under the care of Professor Spence at the Royal Infirmary. This was accordingly done; but on the first night after the patient's admission the dyspnœa was so urgent that the house surgeon found it necessary to perform the operation. The patient recovered from the operation, and in due time left the Infirmary, wearing the tracheotomy tube. He was subsequently, at long intervals, brought to Dr Wyllie for examination, and eighteen months ago it was found on examination that the growths had entirely disappeared. Dr Wyllie thereupon recommended that a new tracheotomy tube should be obtained, with an opening upon its convexity and a plug of ivory for its mouth—the object being to enable the patient to breathe through the larynx and to exercise the voice. Six months ago the voice began to return, and it was now quite normal. The interest of this case consisted in the fact that it showed that warty growths in the larynx of a child may, in course of time, spontaneously disappear, like warts upon the hands. It was now proposed to remove the tracheotomy tube and allow the wound to heal. The boy, on being requested to do so, spoke in a good strong voice; and on the President asking if he could sing, he sang in good tune a verse of "The Happy Land."

### EXHIBITION OF PATHOLOGICAL SPECIMENS.

*Dr Coldstream* showed specimens illustrating the following cases:—

CASE 1.—Eliza Stuart, a pauper, æt. 82. Admitted to the Leith Hospital, 3d December 1879, suffering from symptoms of strangulated femoral hernia. Operation for relief of strangulation at four o'clock on same evening. After operation the symptoms were not relieved; vomiting and abdominal pain still continued, and patient died on the morning of 5th December.

*Post-mortem Examination.*—The sutures were removed and the wound opened up. There was no attempt at union. The sac and protruded knuckle of bowel were found returned into the abdominal cavity. The knuckle of bowel which had been protruded was found to be of a very dark colour; it did not feel doughy, and its peritoneal covering was glistening; one or two small patches of ulceration studded its surface, but did not extend very deeply into the substance of the intestinal wall. The pouch of peritoneum, or sac, contained a process of omentum of considerable size. This (the omentum) was not tightly constricted; the neck of the sac was well marked.

CASE 2.—Thomas Weatherley. Admitted 7th December; died 21st December 1879; æt. 23. Found to be suffering from all the signs of pleuritic effusion, but paracentesis thoracis was followed by a negative result. About the 14th December left side of chest became very œdematous, the œdema being absent from every other part of body except left half of chest from mesial line anterior to mesial line posterior. On the 18th December left half of abdomen and left leg were found very œdematous (no part of head and neck was œdematous). Dyspnœa very great, and seems to be increasing daily.

*Post-mortem Examination.*—Thorax and abdomen only examined. Pericardial sac contained about three-quarters of a pint of serum highly stained with blood. Heart normal.

*Right Lung.*—Bound down by very firm pleuritic adhesions of no recent date; otherwise normal.

*Left Lung.*—Found compressed and displaced outwards and backwards. A large tumour was found occupying the greater part of the left pleural cavity, having its growth apparently from the root of the lung, and extending outwards. It was penetrated by, or, in other words, surrounded the bronchial tubes. The exterior of tumour was firm in consistence, while in the interior was found a thick fluid of a pale yellow colour. The left external iliac vein was found filled with clotted blood. Other organs seemed healthy.

*Dr A. G. Miller* showed an INCISOR TOOTH removed from a girl aged 26, which showed a well-marked crescentic notch, the result of congenital syphilis.

*Dr W. Allan Jamieson* exhibited microscopic preparations illustrating the FUNGUS OF ALOPECIA AREATA or TINEA DECALVANS. After alluding to the different views held as to the pathogeny of this disease, he related the discovery of the habitat of the parasite by Eichhorst of Göttingen. Eichhorst found the minute fungus in heaps and groups of spores within the inner root-sheath of hairs extracted from the margin of a patch of alopecia areata, but had not traced its presence deeper than the upper third of the follicle. He could merely surmise its existence farther down. Dr Jamieson had succeeded in extracting some hairs from cases of alopecia areata with their root-sheaths entire, and found that the spores became more abundant the nearer one got to the bottom of the follicle. One specimen showed a root-sheath with the hair at its deepest part packed closely with innumerable minute spores. These had so compressed the hair that no trace of a bulb remained, the hair ending in a tapering point. Another, under a power of 800 diameters, exhibited a group of spores set free from the root-sheath by tearing it up with needles. These were seen to be mostly minute round bodies, some oblong, and were, perhaps, as suggested by Dr Wyllie, a species of micrococcus. As they did not penetrate the hair, they by their pressure not only caused its atrophy and the resulting baldness, but by their presence in the empty follicle prevented its reproduction for an indefinite period, and also gave rise to the thinning and wasting of the scalp, its pale appearance, and perhaps, also, to the diminished sensibility said to be observed in some cases. We were much indebted to Eichhorst for setting us on the track of the parasite.

*Dr P. Heron Watson* showed (1.) a PHOTOGRAPH illustrating the result obtained in a subperiosteal operation for restoration of the nose. The operation had been performed by him two years ago. The photograph showed the result in profile. The patient had lost in early life both the nasal bones and septum, together with a portion of the alæ nasi. The operation was undertaken after the parts had been soundly healed for years; it was practised as follows:—(*a*) The flattened remnant of the nose was split up by a linear mesial incision; (*b*) the attachments on both sides to the superior maxilla were opened up, and the cheeks separated from the maxillæ by a periosteum elevator; (*c*) the periosteum was divided at the farthest point of its separation; (*d*) the incision in the middle line was united by sutures; (*e*) the two sides of the nose were retained in their elevated position by hare-lip pins passed through and through on the line of the bone, and held in close juxtaposition by means of phial corks applied at each end of the needle. (2.) A PHOTOGRAPH of a patient, illustrating the relations of a large tumour of the parotid region, of twenty years' growth, removed this day. (3.) The TUMOUR itself, a Colloid Adenoma. (4.) MICROSCOPIC SECTION of tumour, showing its composition of ducts distended with epithelium: it has undergone colloid degeneration. (5.) ADENOMA OF THE MAMMA originating in a fibrous tumour of the gland, in which the ducts and acini have become implicated, recently removed. (6.) CYSTIC SPINDLE CELLED SARCOMA of the mamma, removed last week.

*Dr Jamieson* then read his paper on CLEFT PALATE AND INCISOR TEETH, AN INSTANCE OF HEREDITY, which will appear in a future number of this Journal.

*Mr Joseph Bell*, after remarking on the interesting nature of the cases read, and of the whole subject opened up by the paper, described a peculiar arrangement of the teeth he had lately met with in a very severe case of double hare-lip and cleft palate in a youth aged 18, on whom he had lately operated. With regard to the question raised in Dr Jamieson's paper as to the frequent occurrence of hare-lip and cleft palate in lion cubs born in confinement, he referred to the inquiries into this subject made by Professor Haughton of Dublin, and to the success which had followed his suggestion of giving the lionesses more bones to crunch in diminishing the frequency of hare-lip.

*The President* remarked that he had once seen four brothers, full-grown men, working together, who were all the subjects of hare-lip, and who had never been operated upon. He understood that the disease in their case was hereditary. In seeing hare-lip cases he had constantly observed that in one or other of the parents of the child it was evident, from the conformation of the nose, lip, and jaws, there had been a narrow escape from a similar deformity, which had attained its full development in the offspring.

*Dr James* said that, as regards the occurrence of cleft palate in lion cubs born in confinement, the impossibility of rearing the animals would probably be due to their inability to perform the action of sucking. From observations which he had made on the physics of the nasal and buccal chambers, he could not help thinking that this could, in some cases at least, be remedied by artificially obstructing, more or less completely, the anterior nares.

*Dr W. Allan Jamieson* would not occupy the time of the Society further than to thank those members who had joined in the discussion for the interest they had shown, and the Society for the kind manner in which it had received his paper.

*Dr A. G. Miller* then read his paper entitled NOTES OF CASES OF ERYSIPELAS OCCURRING DURING AN EPIDEMIC IN THE WINTER 1879-80, AND TREATED IN THE OLD ROYAL INFIRMARY, which appears at p. 1095 of this Journal.

*The President*, in a few remarks on the paper, asked where the cases had come from, and whether antiseptic dressings had prevented the occurrence of erysipelas.

*Mr Chiene* thanked Dr Miller for bringing the recent epidemic of erysipelas under the notice of the Society. In answer to the question of the President, Mr Chiene stated that no cases of erysipelas had occurred in his wards. One case was admitted suffering from gangrenous erysipelas of the arm. Amputation at the shoulder was performed, but the man sank. Mr Chiene had also seen a fatal case of erysipelas in private practice.

*Mr Joseph Bell* had seen only one case of erysipelas in his wards during the winter. It occurred in a very delicate girl as a consequence, apparently, of a chill in moving her from the old to the new house. It was treated in a private ward with the tincture of the muriate of iron, and rapidly got well without causing any other case.

*Dr W. Allan Jamieson* would like to hear from Dr Miller where his cases of erysipelas came from. It was of much importance to know whether those which came from the surgical wards came from wards where the antiseptic treatment was fully carried out, or from those where the treatment initiated by Lister was not used. Dr Miller had mentioned that whenever a fresh case of erysipelas was introduced among those already under his care there was a renewed activity of the disease. This, it seemed to him, pointed to a bacterial origin, whether these bacteria obtained access to the erysipelatous surface invariably from without, or also from within through the medium of the general system. A Swedish physician had recently found a peculiar bacillus within the unbroken tubercles of true leprosy.

*Mr John Duncan* gave particulars of an outbreak of erysipelas in his wards in the New Infirmary shortly after the removal. It was mild and simple in character. None died, or were even in danger. No case treated antiseptically was attacked; but absolutely every case which was already septic, and in which an incision, however small, was made, became erysipelatous. The dressings in these cases always contained antiseptic material, carbolized oil, boric lint, salicylic wool, or such like, but the wounds were not themselves aseptic. Of course, they were not allowed to become numerous, as surgical interference, except in aseptic cases, was put a stop to. Two of the patients, a nurse and an old woman with sarcoma of the humerus, had erysipelas of the face, not traumatic. It seemed likely that the contagion of erysipelas might enter by a wound or otherwise. The antiseptic principle probably was efficient in preventing entrance by the former channel, but, of course, had no control over the latter. Mr Duncan's experience was that the free use of antiseptics in a ward was utterly untrustworthy as a safeguard against erysipelas in septic cases; nay, that it might prove injurious in causing less stress to be laid on the thorough isolation of erysipelas. His intention was, should he be unfortunate enough to have the disease again introduced into his wards, to dress his septic operations on the strictest antiseptic principles. It would be interesting thus to determine whether putrescent discharges were a specially suitable soil for the erysipelatous virus—whether, in short, antiseptics destroyed the virus, or merely kept the wound in such a state that it was no more apt to become erysipelatous than other parts of the body. It might be that erysipelas often entered otherwise, and only showed at the wound as a favouring site.

*Dr A. G. Miller*, in answer to Dr Jamieson, stated that all his cases came from the town, not from the new Infirmary. In many of those patients who suffered from relapses there was no wound, and therefore no nidus for bacteria. Dr Miller thought that the fact of a sharp purge having so marked a beneficial effect on the milder cases of erysipelas, and also the fact of this disease often occurring without any broken surface or wound being present, went against the theory of the bacterial origin of erysipelas in every case.

## OBSTETRICAL SOCIETY OF EDINBURGH.

### SESSION XXXIX.—MEETING VI.

*Wednesday*, 11*th February*.—Dr ANGUS MACDONALD, *President*, *in the Chair*.

I. *Dr Croom* read NOTE ON A CASE OF INTRAUTERINE HYDROCEPHALUS, WITH RUPTURE OF THE UTERUS.

*Professor Simpson* had little special to say, as the Pathology, Diagnosis, and Treatment had been fully taken up in Dr Macdonald's paper of last session, and the discussion on it. It was interesting to note that there was no distinct evidence of rupture except the cessation of the pains. From his early experience on this point he had always insisted on this to his students. In his first case there was, apart from a little hæmorrhage, nothing to lead one to suspect such a grave occurrence. He agreed with Dr Croom as to the avoidance of forceps in hydrocephalus. Forceps of the ordinary construction were not adapted for application to such an enlarged head. They only added to its bulk and favoured uterine laceration. Hence the case would impress this fact on his own mind, and help him to enforce it on his students.

*Dr Stewart* had a case of hydrocephalus in the North, where a midwife had been in attendance for two days. He perforated with a trocar and canula, and extracted with forceps. The woman died on the third day. In this case he suspected rupture of the uterus.

*Dr Underhill* thought the case illustrated the danger of delay. The woman was only sixteen hours in labour, and yet the uterus ruptured. Had the medical man perforated at once, very probably the woman's life would have been saved.

*Dr Bruce* had, in all his experience, never met with a case of hydrocephalus. He was interested in Dr Croom's case, and agreed with him as to the treatment. He thought that valuable time was lost in sending for the forceps, which would have been avoided had the medical man followed his rule of always carrying the forceps with him. He never had a case of rupture of the uterus, which might partly be accounted for by his habit of not allowing a labour to go on too long without interfering.

*Dr Wilson* had had one case of hydrocephalus, which he had shown to the Society on a previous occasion. The child was a twin, and presented the breech. He had some difficulty in extracting the head, but did not recognise the hydrocephalus until the child was born.

*The President* wished to express his pleasure at listening to Dr Croom's interesting communication. It was of great importance that such experience should be recorded, as it could not be too strongly impressed on the profession that delay in delivery in such cases might cause the death of the mother. He would have liked if Dr Croom had, in the paper, discovered the importance of external manipulation of the abdomen as a means of diagnosis in such cases. This was a most valuable means of examination not sufficiently noticed in our books. It was fully recognised on the Continent, and a recent article by Mundé of New York had given a fair *résumé* of what was known on the subject. By careful and cautious manipulation they could diagnose hydrocephalus even when the breech presented, unless hydramnios were present. They all knew how important the combined external and internal examination was in Gynecology; and now they were beginning to see its importance in Obstetrics. He remembered, in the discussion on his own paper, that Dr Simpson had pointed this out. He wished to explain, however, that he had practised the bimanual in his case, although it did not bulk in his paper. He was sorry Dr Keith had never published his thesis on Hydrocephalus, as it was almost inaccessible; and as one result of this other gynecologists—Dr Keiller among them—were getting credit for Keith's work. In regard to the diagnosis, they should remember that rupture was generally slow, and, as Dr Simpson had said, the symptoms were not very well marked. The cervical segment dilated, thinned, and at last yielded noiselessly. We did not know accurately how ruptures of the body of the uterus occurred, though doubtless they did occasionally, but happily very rarely, appear. He had never seen such a rupture, although he had had cases of rupture of the cervix. In one of his cases there was no fixed time when the rupture occurred. As to the treatment in hydrocephalus, he agreed with Professor Simpson in holding that the use of forceps was dangerous. In his recorded case he had put them on, but they did no good.

*Dr Croom* thanked the Fellows for their remarks on his paper. He was interested in the fact that such an experienced practitioner as Dr Bruce had never seen a case of hydrocephalus. In regard to the President's remarks, he would venture only one criticism. He quite agreed with him as to the importance of external abdominal examination, and had systematically taught and practised this method for years; but he thought that, in the case of a woman *in articulo mortis,* prompt treatment was the more urgent necessity.

II. *Dr Hart* then read a paper on the POSITION AND DISTENTION OF THE FEMALE BLADDER, illustrated by two sagittal sections of frozen fœtuses, which appears at p. 892 of this Journal.

*Professor Simpson* remarked that the paper was one, first, of scientific value, but with a singularly interesting practical bearing. The observations were absolutely correct, as he knew, more especially in the case of the parturient female. He had no special remark to make, except that the subject was of great interest, and one in which there was room for investigation. The bladder, like the vomer and uterus, was never exactly central. He hoped Dr Hart would work up the other displacements of the bladder.

*Dr T. R. Ronaldson* had often noticed the fact, that during labour the bladder seemed very much distended, and yet only a small quantity of urine could be drawn off.

*Dr James Ritchie* had had the same experience as Dr Ronaldson. He had a case lately where the distended bladder could be distinctly felt displaced laterally on abdominal palpation.

*The President* had been exceedingly interested in the paper, and admired its accuracy and originality.

III. *Professor Simpson* then read his REPORT OF MATERNITY HOSPITAL FOR QUARTER ENDING JANUARY 1880, which appeared at page 961 of this Journal.

*The President* felt indebted to Dr Simpson for his admirable report and interesting cases.

*Dr Underhill* congratulated Dr Simpson on breaking the unfortunate spell which the New Maternity had laboured under previously. The mortality in Dr Keiller and Dr Croom's quarters must have made Dr Simpson anxious on commencing his duties. He hoped the future records would be equally free from trouble.

*Dr Croom* congratulated Dr Simpson on his report.

*Dr Gordon* thought the history of the New Maternity and Royal Infirmary was not encouraging. Apparently the sites were not healthy, as in the latter there had been a good deal of erysipelas.[1]

*Dr James Ritchie* mentioned that there had been an epidemic of erysipelas in the town, and it was unfair to charge the New Infirmary with it.

*The President* hoped there would only be a temporary blight on the New Maternity and Infirmary. The present arrangements as to space, light, and sanitary condition were so delightful now, that few could wish themselves back to their old wards. As a whole, the conditions were certainly much better.

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[1] On this point see Dr A. G. Miller's remarks at p. 1116.—ED. *E. M. J.*

*Dr Simpson* wished he could share Dr Macdonald's feelings. He had misgivings whether it was best to have their Maternity patients in large wards. In these there was development of germs, etc.; and, besides, one noisy baby disturbed the whole.

## MEETING VII.

*Wednesday, 25th February.*—Dr Angus Macdonald, *President, in the Chair.*

I. *Professor Simpson* showed his BASILYST for breaking up the fœtal head.[1] So satisfied was he with it that he ventured to demonstrate its use on a dead fœtus before a class of 170 students. The pelvis he employed was a rickety one, with a conjugate of less than 2½ in., so that there was some difficulty in extracting the shoulders. He first perforated a parietal bone, and then, passing the basilyst on, screwed it into the sphenoid bone and then into the petrous portion, the head being steadied meantime by a pair of Lyon's forceps. In this way the vault and base were thoroughly comminuted, and the extraction performed by the cranioclast.

II. *The President* then read a paper on a case of METRO-PERIMETRITIS TERMINATING IN ABSCESS, which appeared at page 874 of this Journal.

*Professor Simpson* asked as to the existence of a bruit, and commented on the rarity of an abscess opening into the uterus. He thought the record interesting.

*Dr Underhill* remarked on the mobility of the mass and uterus as a whole. He remembered a case where, before labour, he felt a tumour which was due to the uterus being saccated.

*Dr James Carmichael* suggested that it might be a tubal abscess.

*Dr Macdonald* thought the evidence was against its being tubal. He thought it originated in the uterus or peritoneum.

III. *Dr Bruce* then read his paper on a case of RESUSCITATION OF THE NEW-BORN INFANT, which appeared at p. 992 of this Journal.

*Dr Croom* thought Dr Bruce's case a valuable one. The important point brought out was that artificial respiration was successful after the heart had ceased to beat. It was generally taught in text-books that under such circumstances artificial respiration was useless.

*Professor Simpson* felt indebted to Dr Bruce for his interesting paper, as it would encourage them to persevere in even apparently hopeless cases. He had conscientiously tried resuscitation when the heart was not beating, but had never succeeded. In bad cases he had blown air into the lungs, not through Dr Bruce's elegant tube, but through a catheter. Dr Wilson of Glasgow had contrived a tube with an indiarubber ball attached to it. The difficulty about this apparatus was that the ball got out of order. He thought blocking of the air-tubes often an obstacle to respiration, and therefore believed that Schutze's method gave better results. He remembered one case where forty-five minutes passed before the child breathed spontaneously. It died in two or three days, as the children in such cases generally do. It was doubtful if in very bad cases the ultimate result was good. Perhaps the inflation produced emphysema or atelectasis. Ribemont, in his sections of frozen fœtuses, had pointed out the importance of the tube-curve. In one special case he (Dr S.) performed tracheotomy, but without avail.

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[1] See description and figure in *Journal* for April, p. 865.

*Dr James Carmichael* had always used in such cases a gum elastic catheter, and thought it answered the purpose very well. He was first led to use it from seeing the late Sir James Simpson resort to it in a dispensary patient. He considered Dr Bruce's instrument a good one, but not possessing special advantages over the ordinary gum elastic catheter. He thought the case narrated was interesting from its successful result after cardiac action had ceased.

*The President* had been pleased with the paper. He was quite satisfied that it was an erroneous principle to give up attempts at resuscitation because the child's heart was not beating. Last summer he helped a friend in a case of breech impacted at the brim in a pelvis whose conjugate measured only 4½ inches. In using the blunt hook he fractured the thigh. The occiput could not be got to rotate forward, and therefore, giving up the child for lost, and being determined to save the mother from any additional risk, he ceased from hurrying the delivery, and took the opportunity to demonstrate to his young friend the mechanism of how the head came over the perineum in this special malrotation. When born the heart was not beating, and therefore the child was wrapped in a towel and put under the bed, and the mother told the baby was lost. When the "corpse" was taken up half an hour afterwards, cardiac pulsation was found, and the child ultimately lived. This introduced another element into the discussion of the value of artificial attempts at resuscitation, as it was evident the badly asphyxiated child might frequently come round of its own accord. He had frequently inflated the lungs by blowing into them. He had by mistake, on some occasions, inflated the stomach, but not now, as he had by experience learned that it was perfectly easy to pass an elastic catheter into the child's larynx, and so avoid inflating the stomach. The methods of artificial respiration were exceedingly interesting. He was at present making an abstract for the Journal of an excellent paper by Behm in the *Zeitschrift für Geburtshülfe und Gynäkologie.*

*Dr Bruce,* in reply, said there was no danger of passing the tube into the œsophagus instead of the larynx, as the left forefinger acted as a guide and could feel that the instrument was properly placed, while it could even be employed to close the opening more effectually by gently pressing down the epiglottis. The chief point in the paper was the fact of the child being brought round after the heart had ceased to beat, and not the form of instrument by which it was effected ; but the one shown was recommended, both from its curve being adapted to the shape of the passages, and from the number of small openings at its point, as being safer and more effectual than any of the extemporaneous instruments alluded to. In addition, fluid could be sucked out by it. There was little risk of its causing emphysema. He had been much struck with the President's case.

IV. *Professor Simpson* then read his paper on DIASTASES IN THE BONES OF THE LOWER EXTREMITIES OF THE FŒTUS, PRODUCED BY THE ACCOUCHEUR, which appears at p. 1057 of this Journal.

*The President* had been extremely interested in the paper. It recalled to his recollection a case he saw with Dr Affleck, where for impacted cross birth he performed spondylotomy. The child had separation of the diaphyses of the ankle and knee in consequence of the abortive attempts to procure version before the spondylotomy. The subject was quite new to him, but in future he would watch in all cases of version, and endeavour to detect any such lesions, if they occurred.

*Dr Croom* had, in cases of turning, felt a "chuck" sometimes, probably due, as Dr Simpson had shown, to a separation at the epiphysis.

*Professor Simpson* remarked on the rarity of cases of lameness after turning. In the case of placenta prævia he had alluded to the child died from bronchitis when six months old.

# Part Fourth.

## PERISCOPE.

### MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By Angus Macdonald, M.D.

The Treatment of Cancer of the Female Generative Organs by a New Method is the subject of a paper, in the *Lancet* for March 27th, 1880, by Professor John Clay, Obstetric Surgeon to the Queen's Hospital, Birmingham. The experience of his particular mode of treatment extends over a period of only twelve months ; but, from the results which have been obtained from its use during that time, the author asserts that an amount of relief has been secured to the patients put under its influence which has not been afforded by any other mode of treatment hitherto employed. From an extended trial of a large number of remedies, both general and local, in the endeavour to cure cancer, the writer was led to the conviction that a remedy for this disease must be one administered internally, and, like the remedies for such diseases as syphilis, must be administered for a length of time in order to prove beneficial. The remedy proposed is Chian turpentine. In the first case in which it was tried it was given in doses of six grains, with four grains of flowers of sulphur, every four hours. The patient was 52 years of age, and suffered from scirrhus cancer of the body and fundus of the uterus. Hæmorrhage was excessive, and pain in the back and abdomen agonizing, and the cancerous cachexia was well marked. The patient apparently had not long to live. The uterus was extensively destroyed by the cancer, and its cavity admitted three fingers. On the fourth day of treatment by the Chian turpentine the patient reported herself greatly relieved of the pain. The os was found quite contracted, hardly admitting the index finger, and the surrounding cancerous infiltration was much diminished. At the twelfth week examination was made, and the parts felt ragged and uneven, and did not bleed on roughly touching them. Several cicatricial spots were seen per speculum. There was no pain or hæmorrhage, and the general health was improved. Other three cases are recorded in the paper, showing similar results from continued use of the drug, the os uteri speedily becoming contracted, and its tissues assuming a more natural and healthy condition. The author concludes that the best method of administration of the Chian turpentine is to give it uncombined; that its effects are more rapid and more marked when given alone. Whatever be the ultimate results of further experience of this drug, he believes there can be no doubt that in these diseases of the uterus it is a most valuable remedy. In the early stages of cancer, it may be affirmed that a speedy cure may undoubtedly be expected, while in advanced cases of the disease, if the surrounding structures are not too much involved in the destructive process, an ultimate cure may reasonably be hoped for.

The Prophylactic Washing out of the Uterus with Carbolic Lotion after Delivery is the subject of a contribution by Professor Stadtfeldt of Copenhagen in No. 7 *Centralblatt für Gynäkologie*, 1880. The author states that the previous communication in No. 5 of the *Centralblatt* (reported by us in the Journal for April) led him to communicate some observations on the application of an antiseptic treatment, modified to suit lying-in women. The author has employed this method since 1870 with ever-increasing energy, and communicated a paper on "Maternities, their Organization and Administration," to the Brussels Congress, in which he publishes his experiences. In that communication the author was able to state, that in the quinquennium 1870-74 the mortality in the Copenhagen University lying-in institution had been reduced to 1 in 87, whilst the mortality during the three previous quinquennia varied from 1 in 37 to 1 in 14, and had at no single quinquennium during the long existence of the institution been nearly so low. The relation is still more favourable in the last quinquennium 1875–79, since of 5098 lying-in women only 44 died of puerperal fever, *i.e.*, 1 in 116. This result the author considers more favourable than can be presented by any similar lying-in institution which receives patients from all the hospital quarters of a town, as well as from the workhouses, in which primiparæ are decidedly in the majority. The author contends, that not only the mortality but the morbility of the patients is diminished by the antiseptic precautions. The method adopted by the author is methodical washing out of the vagina before delivery, the application of carbolic vapour spray during the delivery, and intrauterine injections with carbolic lotion after delivery. The author expresses his astonishment that the application of carbolic spray has found so little acceptance in lying-in institutions, stating that in the Copenhagen Maternity it has been four years in use for every labour, without having caused any injurious result to mother or child. He states, also, that its application causes so little trouble that he cannot see why a method so reasonable for a lying-in institution should be summarily pushed aside. The spray must be commenced from the moment when the parts of the child begin to show themselves at the vulva until any tears which may have occurred during the delivery in the vulva are united by suture, and the genital opening is covered with a layer of prepared jute. The intrauterine washings after delivery have been found specially beneficial under certain conditions, although he has only used three p.c. solution, but in large quantity. He has never observed any evil results from these injections in hundreds of cases. He does not recommend such injections in every case, however, but only when the hand or instruments have been introduced into the passages, or when remains of membranes have been retained in the uterus. A brief account of twelve cases is given in support of the advantage derivable from the use of intrauterine injections.

REIL'S THEORY OF UTERINE POLARITY.—An article on this subject, by Dr Francis Henry Champneys of London, appeared in the *Obstetrical Journal* for January 1880. The author employs, as the basis of his remarks, a paper written by Reil in his *Archiv für Physiologie*, Band vii. Heft 3, A.D. 1807, which is so remarkable and important in its bearings on the conditions of pregnancy and parturition, that Dr Champneys deems it advisable to direct the attention of the English profession to it. Reil maintained "that the forces of the unimpregnated uterus stand in equipoise, separated towards different poles; that the contractile force is in excess, and is evenly divided throughout the whole mass. On impregnation, however, the expansive force obtains the advantage, first in the fundus, and from thence it spreads towards the opposite pole, driving the contractile force before it towards the cervix, until this latter force, driven towards the extreme point, springs over from the neck to the fundus, giving the signal for the commencement of parturition. Thus the axis of the uterus resembles a magnetic line with different poles. The dynamic metamorphosis started by impregnation lasts throughout the course of the pregnancy, and determines its whole development in the different stages through which it advances from its beginning to its end. The expansion begins in the focus of the fundus, and extends thence into greater and greater circles through the whole fundus, body, and portio vaginalis as far as the neck. In proportion as this occurs, the contractile force, more and more pressed back from the fundus, takes refuge in the extreme point of the neck, until it is even here overcome by expansion, and in a moment of time there occurs a change of the poles in the magnetic line; contraction leaps over, as in an overcharged jar, from the neck of the uterus to its fundus, and takes here a firm foothold. The plus of contraction now lies at the fundus, the plus of expansion at the neck, and on the whole contraction prevails over expansion. This inner state appears outwardly as labour pains. This cycle of metamorphosis through which the fundamental forces pass is completed in a space of nine months. From the moment labour begins, contraction increases in proportion to expansion in intensity, returns at shorter and shorter intervals, remains longer, and is stronger in itself, until the moment of the completion of delivery. After the end of the labour contraction possesses itself again of the whole substance of the uterus, and restores the expanded and relaxed uterus, in a space of three months, again to its original volume. Thus, through the fundamental relation which these forces of the uterus bear to each other, there arises an antagonism between the upper and lower parts of the uterus, upon which is founded all possibility of pregnancy and labour. The expansion of the upper part of the uterus in the early part of pregnancy admits of the reception and retention there of the embryo. The contraction of the fundus with expansion of the cervix at labour, provides for the evacuation of the embryo. From conception to the time of labour the conditions of pregnancy constantly become weaker and weaker until they arrive at zero, when pregnancy must cease and labour begin. If the lips of the os uteri are thick and hard, labour may be delayed, even if the os uteri is already open; on the other hand, labour follows certainly in a few days if the os uteri is quite soft and obliterated. The relaxation of the vagina during the progress of pregnancy, and its rapid relaxation under the influence of abortion, are readily intelligible from this hypothesis. So also the cervix uteri becomes relaxed, and the contractile force displaced from it, on the onset of premature labour. The focus of contraction may form in different parts of the uterine cavity, giving rise to irregular action. Thus it may be at the central point of the cavity, as is apt to occur in transverse presentation, when incarceration of its contents results, or the focus may be eccentric, or several foci may exist simultaneously, whence come local contractions, incarceration of the placenta, false and highly painful contractions. After the same law arise the false afterpains. At times shortly after delivery uterine hæmorrhages arise, due to the uterus relaxing after it has been contracted. Weakness is the usual cause of this condition, which is therefore apt to follow strong pains, rapid emptying of the uterus, great distention of the uterus, etc. Mechanical or chemical irritants, such as electricity, removes this expansion and stops the flow of blood." Dr Champneys relates a case which seems to him to illustrate Reil's theory. A woman 23 years of age was pregnant for the fifth time. One night severe hæmorrhage set in, and her condition was such that delivery of the fœtus was resolved upon. The head was found presenting, the os was the size of a shilling, thick, and rigid, admitting two fingers. The membranes were intact, and no placenta was to be felt. The pains were short, infrequent, and ineffectual. Turning by the bipolar method was accomplished, and a leg brought through the os uteri without rupturing the membranes. No sooner had this been completed than the os began to become rapidly softer and more expanded, and extraction followed easily. The hæmorrhage in this case was probably due to separation of a part of placenta which had set up an irregular local contraction, which acted in opposition to the cervical contraction. By bringing the leg into the vagina the contents of the uterus were reduced, the fundus enabled to effect a normal contraction, its rhythm was restored, and delivery rapidly followed. In cases of uterine hæmorrhage with fundal relaxation and cervical contraction, dilatation of the cervix by tents is often sufficient to produce contraction of the fundus and arrest hæmorrhage; and this fact is explained by Reil's theory. Inversion of the uterus, also, and intussusception of the intestine may be similarly explained by the alternation of atony with contraction in the several structures concerned. The author is also inclined to think that all cases of spasmodic dysmenorrhœa ought to be classed with false afterpains, as manifestations of uterine colic, or, in other words, disturbed uterine polarity.

## MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

OIL OF PEPPERMINT.—For burns and scalds one of the best but least known agents is oil of peppermint. Applied by pencil or cloth to the wound, it gives prompt ease from pain, and leads to a rapid cure without scars. Previous to its application the burnt part may be kept under water. It is sometimes advisable to dilute it one-half with glycerine (*Allgemeine Wiener Zeitung*).—The *American Practitioner*, April 1880.

COMPOUND TINCTURE OF BENZOIN IN TOOTHACHE. — T. C. Osborne, M.D., of Greensboro, Ala., has found that a pledget of cotton or lint saturated with compound tincture of benzoin, and packed well into the cavity of an aching tooth, will give immediate relief.—*Medical and Surgical Reporter*, 3d April 1880.

VIBURNUM PRUNIFOLIUM IN THREATENED ABORTION AND MISCARRIAGE.—James B. Hughes, M.D., of Newburn, N.C., in the *North Carolina Medical Journal*, reports several cases illustrative of the efficacy of this medicine in stopping uterine contractions.—*Medical and Surgical Reporter*, 3d April 1880.

OIL OF AMBER (*Phil. Med. Times*, 26th October 1878).—Dr Finck relates several cases of angina and functional cardiac disturbances, especially those cases into which the neuralgic element enters, which yielded rapidly to the influence of the oil of amber. He gave it in doses of from four to ten drops, repeated every thirty or forty minutes during a paroxysm, or in much smaller doses for continued use along with other remedies. In hysterical angina, also, and in the breast pang of deep agony or grief, eight or ten drops of the oil, with some ordinary antispasmodic remedy, every twenty minutes, will often give the happiest relief. — *Chicago Medical Journal and Examiner*, April 1879.

BROMIDE OF ETHYL—ITS PHYSIOLOGICAL ACTION.—This body belongs to the group of anæsthetic agents. The ether is heavier than water; boils at 40°·76; sparingly soluble in water, but is miscible in all proportions with alcohol and water. It is chemically represented by the formula, $C_2H_5Br$. Mr Nunnely of Leeds was the first person who experimented with this ether upon animals and men. Rabuteau noted on lower animals that it had the effect of producing anæsthesia, which appeared quickly and as quickly disappeared, being much quicker than chloroform in both phases. Locally, he states that it neither excited nor destroyed; whilst internally it was well borne. When ingested it was mainly exhaled by the lungs, without regard to the method of introduction. Traces of it have been found in the renal excretion. Dr

Laurence Turnbull of Philadelphia was the first to try it upon man. He found it to produce less distress of the head and heart than chloroform does, whilst internally, in ten-minim doses, it relieved headache, tinnitis aurium, flatulence, and spasmodic asthma. The period in which anæsthesia was produced varied from thirty seconds to four minutes, the average time being two minutes. The quantity required for an anæsthetic effect was from a drachm to half an ounce. In some cases it produced vomiting, excitement, and prostration, but neither syncope nor asphyxia was seen to take place. In dogs, rabbits, and frogs it had a rapid action. Turnbull, in man, found it to increase the pulse and arterial pressure, causing a prickly feeling in the elbow and hand, with rapid loss of mobility. He states that the period of excitement is shorter than that of ether. Dr Levis has also used this agent quite extensively. He believes it quickens the pulse, but slightly, as well as the arterial tension. The respiratory movements are but little influenced, except as usual in deep sleep. He found it to vaporize more readily than chloroform, to be unirritating to the lungs, and to produce anæsthesia in one-third less time than chloroform does. After the anæsthetic was removed, co-ordination of the muscular movements was rapidly regained. During the anæsthesia the pupils were dilated. Dr George L. Sowers has also studied the effect of this agent upon man. He states that it has no depressing effect, like ether and chloroform. It increased the pulse, flushed the face, and set the sweat-glands into activity, whilst the respirations were increased or decreased. The pupils were contracted or dilated. The fact that the bromide of ethyl is an anæsthetic less dangerous, and at the same time quicker, than chloroform and ether, makes it a drug of vast importance both to the profession and their patients. If we compare its action with other anæsthetics, as ether, chloroform, and nitrous oxide, it will be found as follows:—1. Chloroform increases the pulse, then slows it by a cardio-inhibitory stimulation; ether increases the pulse; nitrous oxide also increases it by paralysis of cardio-inhibitory apparatus; whilst bromide of ethyl increases the pulse by an action on the heart itself. 2. Chloroform reduces blood-pressure by paralysis of the main vaso-motor centre and cardiac debility; ether greatly increases it, and keeps it increased; and nitrous oxide also increases it; bromide of ethyl increases it, either by a stimulation of the spinal or peripheral vaso-motor system. 3. Chloroform increases and then decreases respiration; nitrous oxide reduces it; bromide of ethyl decreases it by a central action (By Isaac Ott, A.M., M.D., late lecturer on Experimental Physiology, University of Pennsylvania).—The *Detroit Lancet*, April 1880.

ASPIDIUM MARGINALE IN TAPE-WORM.—The oleo-resin of this species of male fern was used successfully by Dr Cressler in 1878 as a tænicide. Professor Maisch, at a recent meeting of the Pharmaceutical Society of this city, stated that he also had found it valuable. The oleo-resin, diluted with an equal bulk of alcohol, had been agitated with about fifteen or twenty times its weight of sugar, and afterwards with sufficient water to form a syrup. Given in this manner in divided doses, like oleo-resin of male fern, it was well borne by the stomach. The same method had subsequently been tried by Mr Kennedy with equal success, as reported to him by the Pennsylvania Pharmaceutical Association at its last meeting. The only points to be observed were that the rhizome should be sound and free from any brown or decayed portions.—*Medical and Surgical Reporter*, 27th March 1880.

ERECTILE TUMOUR TREATED BY INJECTION OF CHLORAL.—Dr Antonio Pupi (*Le Sperimentale* and *Le Praticien*, No. 62, 1879).—A rapidly-growing erectile tumour of the naso-palpebral region was injected, at intervals of fifteen days, with an aqueous solution of chloral, one to ten. After each injection the consecutive tumefaction was almost immediate, but not painful, and only lasted four or five days. The cure was as complete as possible, scarcely any traces of the tumour being visible.—*Chicago Medical Journal and Examiner*, April 1880.

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## PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

AT a recent meeting of the Academy of Medicine, Paris, Dr Edward Fournié read an interesting paper on the part played by the Eustachian tube in the physiology of hearing. Contrary to the generally admitted opinion, M. Fournié, after a series of experiments, has been led to conclude that the Eustachian tube is constantly open. The muscles attached to it, far from being dilators, act the part of constrictors, which close the tube during certain movements, such as those of mastication and speaking. On the other hand, the renewal of the air in the cavity of the tympanum is produced by a sort of respiration in which the constrictor muscles perform the office of expirators, whilst the elasticity of the cartilage of the ear supplies the place of the inspirator muscles.—*British Medical Journal,* March 20th, 1880, p. 456.

AT a meeting of the Academy of Sciences, Paris, held on 29th March, M. Boucheron read a paper on a mode of treatment of certain infantile cases of deafness or deaf-mutism. The cases referred to are those arising from naso-pharyngeal catarrh, causing the mucous membrane of the Eustachian tube to swell and stop the passage, the stapes ere long being, through the now excessive pressure of the external air upon the tympanic membrane, made to press strongly on the fluid of the labyrinth, thus injuring, through long-continued pressure, the expansion of the portio mollis in the vestibule. M. Boucheron, in treating the above cases in as early a stage as possible, puts the child under chloroform, applies with a brush a solution of iodine to the posterior nares and pharynx, forcing air along the floor of the nostrils through the Eustachian tube into the tympanum, either by Politzer's method or catheterization of the Eustachian tube, immediately afterwards. [*In cases of young children, the Eustachian catheter is seldom required, the Politzer method being quite sufficient to force the air along the floor of the nostrils into the Eustachian tube and tympanum, carrying along with it the remedy previously applied to the pharynx, etc. It is far better not to give chloroform, but to adapt the remedies and their method of application to the case.*—J. J. K. D.]—*Nature*, April 8th, 1880, p. 556.

A CASUAL CONTRIBUTION TO THE ÆTIOLOGY OF EPISTAXIS, BY DR LAUDON OF ELBING.—Cases of severe bleedings from the nose, lasting for years, are not of unfrequent occurrence in medical practice, but still they can scarcely claim for themselves a very special interest. At the same time I do not hesitate to communicate the following case, as the cause of the bleedings is, at least in this district, very rare, and is not given as such even in the best and most recent text-books, as in that of Ziemssen,[1] where, indeed, a claim for completeness can be raised. I am inclined to believe that this source of epistaxis has not been noticed until now. The case occurred in a journeyman locksmith employed in a manufactory in this place. He is forty-two years of age, of spare build, and, except for the usual diseases of childhood, through all of which he passed successfully, has always enjoyed good health. In the year 1870 he joined the army against the French, and lay for eighteen weeks before Metz, after which he was ordered to Normandy. Very shortly after the war the patient sickened from liver complaint, combined with pains in the region of the liver, icterus, and gastric irritation. These liver symptoms were present in the year 1874, at the time when the patient entered the manufactory here. As the sufferings from the liver were much more distressing this year, my aid was required. The patient complained of severe pains in the right lobe of the liver; the liver was only a little enlarged; pressure over it caused severe pain. The tongue was thickly coated; the appetite was completely gone; there was fever; pulse 110, temperature 39°·5 Reaum. The diagnosis was perihepatitis. I ordered a gentle bleeding, cold applications; gave inwardly calomel with opium ana 0·03 grammes; then, further on, as the inflammatory symptoms and fever became subdued, an infusion of rhubarb with carbonate of potash, and, finally, the salts of Carlsbad. Notwithstanding the removal of the inflammatory symptoms, there remained a slight icterus, which had been associated almost from the first with the patient's sufferings from his liver in the year 1871, and which has not, at the end of September 1879, completely disappeared. It looked as if the patient could not recover; indeed, a condition of great prostration soon came on, from the causes we are about to mention. With the whole course of this disease bleedings from the nostrils were intimately associated. They appeared, not at the very beginning of the sufferings from his liver, but shortly afterwards, in the year 1871. The bleedings continued almost constantly for seven years, coming on at first in a milder form chiefly in the forenoons; then they became much more copious, and commonly twice a day. At the same time the patient complained of a painful feeling of pressure in the left nostril. The examination of the nostril by means of the speculum showed nothing but a considerable inflammatory swelling of the nasal mucous membrane, whilst that of the right nostril appeared perfectly healthy. Injections of vinegar and water and styptics, with the internal use of sulphuric acid and ergotin, were employed without any good result. Plugging of the nostrils was not employed, as the patient stoutly refused to submit to this last refuge. About Whitsunday of this year, 1879, when the painful feeling of pressure in the upper part of the left nostril, specially towards the root of the nose, was very severe, the patient, with a violent, unexpected sneeze, ejected from the left nostril a parasite which, on first examination, looked like a small earthworm, making active movements with its lower, somewhat smaller tail-end. The worm was at once brought to me, when I put it into water, and as I had to be from home for three days, on my return I found it still alive and making the same peculiar lively twistings. The patient began to recover gradually after the expulsion of the worm; the bleeding ceased at once, and of previous co-existing diseases there remained not a trace except a faint icteric discoloration of the skin, pointing to former liver disease, but otherwise a healthy, flourishing appearance and good bodily condition. As the parasite was entirely new to me, I sent it for examination to Professor Benecke of Königsberg, who had the kindness at once to inform me that it was a young specimen of the genus Linguatulidæ, the so-called Pentastoma tænioides.[1] This is an entozoon, which in its developed condition inhabits the frontal and nasal cavities of the dog, the wolf, and the fox; occasionally of the horse and the goat; sometimes—indeed, in several districts, very frequently—those cavities of man. Alexander von Humboldt met with it in the respiratory organs of serpents. The young forms live encapsuled in the thoracic and abdominal cavities of several herbivorous animals, which are occasionally deposited on the ground as free embryos by their immigration into the bowel of the animals. Sometimes the liver is very much destroyed by them. After the encapsuled animals have gone through several metamorphoses, they escape from the capsule and move about for a considerable time in the body of their host, and if he does not die they again become encapsuled. Should they then be eaten with the improperly cooked flesh of their host, they generally wander to the frontal and nasal cavities, remaining there comparatively still, their eggs escaping with the nasal mucus. How they occur in man, and how, under certain circumstances, they are met with in the liver, has not been ascertained. *Epicrise.*—How the above-mentioned parasite got into our patient is, as we see from the foregoing, difficult to determine. Perhaps it was from the irregular ways of living during the war, from frequently partaking of raw, decaying nourishment, that the entrance of such an animal into the system can be more easily accounted for than during times of peace. Without doubt the parasite was the source of all the trouble, as the constant bleeding from the nose for almost seven years immediately ceased on its expulsion. This case is specially instructive. That the disease of the liver, which ceased when the animal became encapsuled, thus preventing further destruction of that organ, was due to the entrance of the Pentastoma, is very apparent. The correctness of this acceptation one learns further from the fact, that the parasite certainly gave rise to complications and dangers to the duration of the patient's life, but did not altogether compromise it. It is obviously very difficult to conclude, in diseases where icterus and bleedings from the nose exist, that Pentastoma tænioides is present. Perhaps the co-existence of disease of the liver with long-continued epistaxis, combined with a painful feeling of pressure in the nasal or frontal cavities, might make the diagnosis more apparent.

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[1] Compare with the section on *Diseases of the Nasal Cavities and Pharynx* by Wendt, vol. vii., p. 1., and onwards.

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[1] For those who are specially interested in the natural history of this animal I would draw their attention to an excellent monograph by Leuckart on *The Structure and Development of Pentastomæ*, 1860; also Kuchenmeister on *Parasites*, 1855, page 362, and onwards. The animal is figured in table vii., figs. 11 and 13.

ANEURISM BY ANASTOMOSIS OF THE EAR.—At a meeting of the Pathological Society of London, held on Tuesday, April 20th, 1880, Mr Eve showed a specimen of an ear presenting this condition, which had been removed by Mr Thomas Smith from a girl aged 21. At birth there had been a small pulsating lump in the upper part of the pinna, which had been ligatured when the girl was fifteen years of age. The lump had, however, gone on increasing in spite of a second operation two years later, and finally it involved the whole pinna. There were moderate pulsation and a humming *bruit*. There was enlargement of the right common carotid, and of the temporal and posterior auricular arteries. Under the microscope there was great increase in the number of arterioles and capillaries, which anastomosed so as to form a very close network. The walls of the arterioles were extremely thin in proportion to the size of the vessels, and were composed of an epithelioid layer supported by a layer of condensed connective tissue. There were a number of capillaries in process of formation by means of branched protoplasmic filaments communicating with the epithelioid cells of neighbouring capillaries. Injection had in some instances penetrated into the roots of the processes. The growth probably arose directly from the original nævus by an extension of the morbid process.—*British Medical Journal,* April 24th, 1880.

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## OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

The Histology of Molluscum Contagiosum.—This has again been made the subject of investigation by the late Dr Tilbury Fox and Mr T. C. Fox, since an opinion has recently been advanced that the disease is in no way connected with the sebaceous glands, but that the little tumours are caused by a peculiar overgrowth and degeneration of the rete Malpighi. Lukomsky thinks the process begins by a growth downwards of the interpapillary portion of the rete by cone-like processes into the corium. These eventually form the septa between the acini and lobules; the cells degenerate, and fill up these latter. Fox was fortunate enough to find, in the skin adjoining a small tumour, a sebaceous gland in a state of commencing hypertrophy, and this progressive hypertrophy, which condenses the connective tissue round into a capsule, he has studied in a variety of specimens. As regards the contents of the tumours, he finds the peculiar mollusc bodies to be simply produced by a process of extreme vacuolation of the ordinary lining cells of the acini, which process goes on more or less constantly in health. He does not look upon the contents of the cells as colloid, but rather as altered sebum. He never detected any fungous elements in a fresh specimen which might throw light on its contagiousness, while there are no signs of the peculiar irritation and destruction to which fungi invariably give rise. He therefore concludes that molluscum contagiosum is undoubtedly a disease of the sebaceous glands, consisting in hyperplasia of the gland structure as a whole, increased endogenous formation of gland cells, their subsequent vacuolation, and finally the formation of the peculiar *mollusc bodies* by the alteration of the sebum, which forms and collects in these vacuoles, and distends the enlarged cell.—*Annotated Reprint from Trans. Path. Soc.*, London, 1879.

The Bacillus Lepræ.—Dr Hansen of Bergen, in 1874, stated in the *Norsk Magazin für Lægevidenskabs* that he frequently (indeed always, when he specially sought for them) found in the tubercles of leprosy small rod-like bodies within the cells of the growth, while he never could find similar bodies in the freshly-drawn blood of leprous patients. Dr Neisser of Breslau subjected preparations containing these to Kohn and Koch, who recognised them as a peculiar species of bacillus, and looked on them as the contagium of leprosy. Hansen has undertaken a fresh investigation of the tubercles, and now communicates part of his observations. The examination of sections of tubercles from numerous lepers showed free bacteria, some of uniform thickness, others more spindle-shaped, bacteria enclosed within cells, and brownish masses which proved to be zoogloea. The life history of this bacterium has not been made out, nor its connexion with the communicability of leprosy.—*Virchow's Archiv*, 15th January 1880.

A MODE OF TREATING OBSTINATE SERPIGINOUS SYPHILITIC ULCERS.—Charlouis, having failed to cure three cases of serpiginous syphilitic ulceration by ordinary methods, adopted with rapid success the following:—After painting the ulcer with tincture of iodine, mercurial ointment thickly spread on lint was applied, while potassium iodide was administered internally. In a short time the patient complained of considerable burning sensation in the sore, which lasted about an hour. Cure was complete in one instance in six, in another in eight days; in the third the time is not mentioned, otherwise than it was short. Charlouis observes on this, that, by means of the simultaneous use of tincture of iodine and unguentum hydrargyri, iodide of mercury was formed in the diseased tissues; that this in its nascent condition produced the burning sensation, and acted much more energetically than if iodine and mercury apart had been applied to the ulcer.—*Schmidt's Jahrbücher*, 1879, No. 12.

PRURIGO AND ITS TREATMENT BY PILOCARPINE.—O. Simon regards pilocarpine with much favour as a remedy in prurigo. He administered a daily subcutaneous injection to adults of 1 gramme of a two per cent. solution (about 15 minims). He also employed a syrup of jaborandi (3 parts of jaborandi leaves with 15 of boiling water and 18 of sugar)—two or three tablespoonfuls as a dose. The patients were wrapped for several hours in woollen clothing after the administration of the remedy. For the most part profuse sweating was induced. The intense itchiness lessened and entirely disappeared; but on this point too much stress must not be put, since hospital treatment tends to diminish itching. The eruption, however, soon became markedly less, the swelling of the inguinal glands fell, and in from two to four weeks almost entirely disappeared. The treatment by pilocarpine was aided considerably by alternating baths and painting with tar. Pilocarpine cannot be regarded as a definite means of cure, any more than other therapeutic agents; yet it appears to postpone or render milder the recurrences. As respects the promotion of hair growth in baldness by means of pilocarpine, which the papers of Schmitz and Von Schüller had led us to hope it might do, Simon did not find it did so. Only in one case of universal alopecia the lanugo grew over the surface.—*Centralblatt f. d. Med. Wissenschaften*, 6th March 1880.

BALSAM OF PERU IN PRURITUS.—In a communication to the *Deutsche Med. Wochen*, No. 34, Dr Auerbach of Berlin states that, having, in common with so many other practitioners, found the balsam of Peru a most valuable remedy in itch, he has for some time past used it in the treatment of pruritus with the greatest success. After the first rubbing into the part affected great relief is obtained, and in a few days a cure results. He relates a very obstinate case which, after resisting all kinds of treatment for years, was speedily cured by the balsam.—*Dublin Journal of Med. Science*, March 1880.

## PERISCOPE OF OPHTHALMOLOGY.

By GEORGE A. BERRY, M.B.

CORRECTION BY MEANS OF GLASSES OF THE AMETROPIA OF KERATOCONUS.—The subject of the treatment of conical cornea by neutralizing the abnormal curvature with properly ground glasses was introduced by Ræhlmann at the last Ophthalmological Congress at Heidelberg. From measurement of the curvature in five cases he found that the surface of the cornea in keratoconus, instead of being spherical, more nearly represents an hyperboloid. He therefore had conical glasses ground, and tested their effect in these cases. Unfortunately, four of the cases presented complications (opacity of the cornea and vitreous, detachment of retina), consequently much improvement could not be expected in them, although the improvement of vision produced by the new glasses was greater than could be attained by the combination of concave glasses with a stenopaic aperture. The fifth case was that of a girl aged nineteen, with typical keratoconus of the right eye and perfect transparence of the cornea. Without any glass, V = fingers at 15′; with stenopaic aperture concave and cylindrical glasses, $V = \frac{1}{10}$; with the conical glasses, $V = \frac{1}{2}$. Without correction of any kind, and with concave glasses, she was able to make out with difficulty Jæger 9 and 10; with conical glasses she read Jæger 3 and 4 at a comfortable distance, and Jæger 1 and 2 close up to her eyes. These glasses were found to be by no means easily ground, as the grinding block must be made to rotate on its axis alone. An hyperbolic grinding surface would soon lose its shape; Ræhlmann used, therefore, the asymptotic cone to the surface required.

REGULATIONS FOR THE EXAMINATION OF THE VISION OF RECRUITS IN THE BELGIAN ARMY.—Warlomont gives a report of the new optometric regulations adopted by the Belgian Government, and now in force in the army (*Annales d'Oculistique,* Jan.–Feb. 1880). The principal points in the examination are as follows:—The vision of the right eye is alone considered of importance; all that is required of the left is that the extent of the field of vision should be normal. The lowest degree of visual acuity compatible with service has been fixed at $\frac{1}{3}$. As the inconvenience of wearing glasses must be looked upon as of less importance than the exclusion of a number of men otherwise well fitted for service, whose visual acuity reaches $\frac{1}{3}$ and upwards on the correction of their ametropia, it has been deemed advisable to permit of the use of spectacles, and to admit cases of myopia requiring a correction of up to five dioptres, and of hypermetropia up to six dioptres. Loiseau's optometer is used in the examination both of the refraction and acuteness of vision, as it is the most simple and expeditious mode of conducting such an examination, and does away with the necessity of having every case examined by an ophthalmic surgeon. The only way in which simulation is possible is for any one to deny that he sees anything through any glass in the optometer. Such doubtful cases have to undergo further examination at the hands of specialists.

ON THE SEPTIC EMBOLISM OF THE EYE OCCURRING IN PUERPERAL FEVER.—Hirschberg is of opinion that the metastatic inflammation of the uveal tract has not as yet sufficiently engaged the attention of ophthalmologists. He has observed six cases in all, in three of which both eyes were affected, and describes minutely (*Archiv f. Augenheilkunde,* vol. ix. 3) the symptoms and post-mortem appearances in one which he was able to follow almost from the beginning. The patient, aged 34, whose puerperal attack came on sixteen days after the birth of her third child, complained on the twenty-first day of great pain in the eye; thirty-six hours afterwards the condition was as follows:—Slight chemosis, cornea clear, semilunar-shaped hypopyon covering half the breadth of the iris below; pupil semi-dilated under atropine, central exudation on the anterior capsule, leaving a clear margin, V = fingers at 2′. Next morning complete blindness of right eye. The left, which was unaffected the day before, was now almost blind. With the ophthalmoscope a medium-sized hæmorrhage could be made out, surrounded by a grayish-white area, "a septic embolism of a small retinal vessel, certainly of only a few hours' standing." Next day complete blindness and a copious thick exudation covering the iris. Death on the thirty-second day after confinement. At the post-mortem examination the right eyeball was opened, and the retina found to be destroyed by suppuration and the vitreous infiltrated with pus. The left was hardened in Müller's fluid and examined microscopically after some months, when the principal changes were found to be in the retina. The embolic nature of the intra-ocular process was first demonstrated by Virchow, whilst the septic character of the embolism has been made out by Heiberg and Litten. The difference between ordinary and septic embolism is thus put by Hirschberg:—"Ordinary embolism causes sudden blindness of the affected eye, accompanied by the well-known ophthalmoscopic appearances, and ends in atrophy of the optic nerve and retina. Septic embolism, whether of a retinal or choroidal artery, rapidly gives rise to a disturbance of vision, usually associated with a veiling of the fundus, and ends in suppurative inflammation of the retina, vitreous, choroid, iris, etc. With septic embolism of a very small branch some amount of vision may be retained for some hours or days, until suppuration in the fundus brings about complete blindness; aseptic embolism of the same branch might, under certain circumstances, completely escape detection."

Neuro-paralytic Keratitis following Division of the Infra-orbital Nerve for Neuralgia.—A considerable number of cases are on record in which a complete or partial destruction of the eye has followed injury to the fifth nerve. Kretschmer (*Centralblatt f. Augenh.*, March) publishes a case, in a man aged 67, of keratitis and panophthalmitis coming on immediately after the division of the infra-orbital branch of the fifth, at its point of exit from the infra-orbital foramen. The neurectomy was not done by him, and according to the statement of the patient the central end of the nerve was cauterized. The editor of the *Centralblatt* refers to a similar case published by Langenbeck in 1868.

Amblyopia in a Case of Lead-Poisoning. — Landolt had occasion to make a careful examination of the vision in the case of a painter aged 26, who at the time was a patient at the *Hôtel-Dieu*, where he was being treated for left hemiplegia. On admission he complained of everything appearing enveloped in a dense fog, so that he was quite unable to distinguish anything. The vision gradually improved, and he was first seen by Landolt four months afterwards. At that time there was complete loss of sensibility in the left side of the body, and considerable lameness. The movements of the eyes were unimpaired, and the pupils equal in size. The left cornea was extremely insensitive, and the vision of the left eye reduced to counting fingers close at hand. With the right eye he could count fingers at 15′. Blue and violet appeared black, and yellow white, whilst he was able to distinguish red and green. The field of vision was interrupted by two circular concentric scotomata, extending, the one from 25° to 30°, the other from 40° to 70°. The papillæ presented a grayish-red aspect, with dilated veins, otherwise normal. The symptoms resembled those which Landolt has found in hysterical amblyopia, and yielded speedily to metallo-therapeutical measures!—*Annales d'Oculistique*, March–April 1880.

ON THE RELATION BETWEEN ACCOMMODATION AND CONVERGENCE.—At the suggestion of Professor Nagel, Bisinger (*Mittheilungen aus des Ophth. Kl. in Tübingen*) has repeated Donders's experiments on relative accommodation, or the range of accommodation which is independent of convergence for objects at different distances. Metrical notation is used throughout, even with reference to convergence where the complement of the angle between the line joining the centre of both eyes and the visual axis, when directed on an object in the mesial plane at the distance of one mètre from the eye, is taken as unity, and called one mètre angle. The angle formed, therefore, between the visual axis when directed straight forward and at an object in the mesial line one-fourth of a mètre distant from the eye, is $= n$ mètre angles; if this angle $= \theta$ and $d =$ half the distance between the centres of the two eyes, we have *sin. n mètre angles* $= sin.\ \theta = d\ \frac{n}{m}$. Bisinger points out the importance of taking into consideration the distance of the lenses from the eye in calculating the range of relative accommodation. He finds that the range of relative accommodation is subject to great variation, dependent principally on age and practice. At first there is in all cases an increase until a maximum for some particular degree of convergence is reached, then a diminution takes place. The relative amount of negative and positive accommodation for any position is also very variable, though, on the whole, there is a gradual increase of the negative and decrease of the positive portion as the near point is approached, beyond which it is of course wholly negative. The most important and novel part of Bisinger's paper has reference to the relative breadth of fusion, or the amount of independent convergence (negative or positive) for definite degrees of accommodation. The near point of relative fusion is determined by the strongest adducting prism, the far point by the strongest abducting prism which can be overcome in the interest of binocular vision without altering the state of accommodation. The tables and curves given in the paper show that the extent of the relative range of fusion thus determined is subject to individual variation, that it is as a rule much the same for all degrees of accommodation, and that the relation between the positive and negative portions remain also much the same throughout. On comparing the range of relative accommodation with that of relative fusion, the former is found to be considerably greater, and this is still more marked when the relative is compared with the absolute range in each case. Binocular fusion appears, therefore, to be more dependent on accommodation than *vice versâ.*

CHOROIDITIS AFTER RELAPSING FEVER.—During the last epidemic of relapsing fever at Breslau, 21 cases (out of 325, or 6 per cent.) were followed by choroiditis. The symptoms are described by

Trompetter (*Klin. Monatsblätter f. Augenh.*, April), who had occasion to see more than half of the total number. The patients never presented themselves until the inflammation had reached its acute stage, so that the preliminary amaurosis described by some authors was not observed, although it probably existed in most of the cases. There was always considerable injection of the deeper vessels over the whole visible surface of the sclerotic. The occurrence of hypopyon was frequent, without any appearance of coexistent iritis. The hypopyon was usually small in amount, and the iris active. The presence of opacities in the vitreous was constant. The light-sense was found to be greatly diminished, and did not improve so rapidly as the visual acuity. In all cases in which it was possible to test the field of vision it was found to be concentrically limited—a circumstance which the author thinks points to a localization of the inflammation principally to the anterior portions of the choroid and ciliary body. All the cases recovered.

CILIO-RETINAL VESSELS, AS SEEN BY THE OPHTHALMOSCOPE.—Schleich (*Mittheilungen aus d. Ophth. Klinik in Tübingen*, 1880) has had occasion to observe in 15 cases a system of retinal vessels first described by Nettleship, and called by him cilio-retinal vessels, from their probable origin. Schleich figures five cases, and concludes that these retinal vessels are by no means so rare as commonly supposed. They are of variable size, though generally small, and arise at or near the temporal border of the papilla. They are almost always found to present a convex curve towards the centre of the papilla, and distribute themselves horizontally in the region of the macula lutea. They appear to stand in no definite relation to the central artery or vein. He has observed them much more frequently in myopic eyes with more or less marked crescents. This he thinks may be due to the fact that not only are the details of the fundus so much more distinctly visible in high degrees of myopia, but that finer vessels are more distinctly seen against the white background presented by the sclerotic in the staphyloma posticum. H. Muller and Nettleship have demonstrated, on postmortem examination, the existence of vessels not springing from the central vessels, and which undoubtedly are to be looked upon as branches of the ciliary vessels which enter the eye by perforating the sclerotic at some point between the posterior pole and entrance of the optic nerve. In several of his cases this point of perforation in the sclerotic was distinctly seen. In the other more numerous cases, in which the position of the perforation is not seen, the vessels appear to arise at the border of the choroid, or, if there be no crescent, at the border of the papilla; they do not therefore pierce the choroid, but bend round it. The curved form of these vessels where they come into view is owing to their retaining for a short time the direction they have on piercing the sclerotic. Sometimes the curved portion lies on the crescent, showing the previous point of inflexion round the border of the choroid.

NOTE UPON ERGOTINE, ITS INCONVENIENCES AND ITS DANGERS.—Dr Boissarie, in a communication read before the Académie de Médecine, deducts the following conclusions:—"Ergotine, which renders important services in hæmorrhages when we have need of immediate action, cannot be administered with impunity in affections of long duration, in order to affect the system. Ergotine has the property of accumulating, remaining in the system, and indicating its presence at a period more or less distant by some sudden serious manifestation. Following the teaching of Trousseau, of giving for a long time small doses of the poison, is to expose the patient to the risk of sudden gangrene." Here follows an account of a case of spontaneous gangrene of lung.—*Gazette Médicale de Paris.*

MODIFICATION IN THE APPLICATION OF SAYRE'S PLASTER-JACKET.—M. J. Boeckel has put into practice in the case of children a method which he finds less inconvenient than that of suspension. The patient is placed in a horizontal position, with the face downwards; one assistant holds the arms, and a second the legs. The body thus forms a curve with the concavity posterior. In this position there is no pain, the vertebræ are well replaced, (se redressent très-bien), the plaster is easily applied, and the use of chloroform not required. Care must be taken that the under part of the body be supported by a third assistant, to avoid the sudden adjustment of vertebræ.—*Gazette Médicale de Strasbourg.*

# Part Fifth.

## MEDICAL NEWS.

### OBITUARY.

### DR GOURLAY, OF WESTON-SUPER-MARE.

FREDERICK GOURLAY was born in Dundee in 1835. He commenced his medical education in 1853 at the Edinburgh University, where he graduated in 1857. From the first he won the hearts both of teachers and fellow-students by his attractive appearance, genial manners, and kindly disposition.

As a proof of his superior abilities, he was elected President of the Royal Medical Society, and almost immediately after taking his degree he was made Resident Physician in the Royal Infirmary of Edinburgh. Subsequently he held the coveted post of House Surgeon to the clinical wards under Mr Syme.

On leaving the Edinburgh Infirmary he received the unusual compliment for so young a man of being appointed full surgeon to the 2d Lanarkshire Militia. His stations were Aldershot and Dublin; but at the end of two years, the regiment being disembodied, he resolved on taking private practice. In 1862 he settled at Weston-super-Mare, where he soon endeared himself to a large circle of patients and friends, and acquired a leading professional position, which he held to the day of his death. He had not been long at Weston before he was appointed Honorary Physician to the Hospital, to which he devoted much of his time, successfully promoting its advancement. When the Weston Sanatorium was established he became its consulting physician.

For the last fourteen years of his life he held strong religious opinions, and devoted much of his time to the promotion of them and to works of philanthropy, for which reason, though he never neglected his patients, he mixed less than formerly with his professional brethren. Many may differ from him both in the peculiar tenets he held and in his modes of promulgating them, but none who were brought into personal contact with him could fail to believe in and to respect the honest sincerity of his convictions, and the consistency with which he acted up to them.

In the midst of severe domestic afflictions which would have crushed many a brave spirit he was resigned and cheerful, carrying on his works of healing and missions of mercy to the last. But though his courage was undaunted, his trials told upon his bodily health and prematurely aged him. He succumbed to an attack of acute pneumonia, and after a few days' illness died on 20th April, aged 45. As a mark of the respect in which he was held at Weston, on the day of his funeral the shops generally were closed, and blinds of private houses drawn down, while he was followed to the grave not only by relatives, friends, and patients, but by professional brethren, ministers of various denominations, and many tradesmen of the town.

## CORRESPONDENCE.

*To the Editor of the Edinburgh Medical Journal.*

FALKIRK, 17*th May* 1880.

DEAR SIR,—I notice with pleasure that Professor Simpson has given in your last number a Report of the Royal Maternity and Simpson Memorial Hospital for a quarter, and hope that these reports will be continued periodically, as I cannot doubt that this would be for the benefit of the Institution as well as of the profession. Very properly, a certain amount of precision has been introduced into the history of some of the cases, such as giving the lengths of the first and second stages of the labours, without which it is really impossible to form a correct estimate of the practice pursued, when the case, let us say, comes to be one where the forceps have had to be employed; but other particulars are wanting which are equally essential in this respect. For example, it is said there was a fœtal mortality of ten, but it is not said whether all these were viable children. Again, it is said the forceps were applied thrice, but the results to the children in two of them are not given, nor are we informed what was the supposed cause of any of the ten fœtal deaths. It is said, again, that, besides these, two "died from debility," and that four (twins) were premature and still-born. But it may be asked, What is meant by "died from debility?" Did they live an hour, a week, or what, and was the labour the apparent cause of the debility or not? Then, at what supposed month were the four twins born? Were they viable? For this comes to be the important question in practice.

There are other particulars which I think it would be interesting and proper to have stated in future reports, such as, 1*st*, Was chloroform given? and if it was, when, and for how long? 2*d*, Where the forceps were used, in what portion of the pelvis was the head? Had the face turned into the hollow of the sacrum? or was an ear near the symphysis pubis (as in Smellie's fourth plate), and could an ear be easily felt with the finger? or, again, was the head at the brim, and was the head within or out of the uterus? 3*d*, When the case has been delayed, what has been the cause of this? Has the uterus been caught? have the pains been deficient? has the cord been round the neck? and were persistent efforts made to get the uterus over the head, and how far were these successful? 4*th*, Where forceps have been used, was the instrument straight or double curved, and what was its length, if not well known, etc.?

Assuming that the 10 children which were still-born were viable, this, in the 152 children (excluding the 4 twins), gives a fœtal mortality of more than 1 in 16, or upwards of 62 in the 1000. This, at the present day, must be considered a very heavy mortality, and I suspect, if continued in a private practice, would be fatal to the reputation of most country practitioners.

The cases being 154, and the forceps having been used thrice, this gives a ratio for their use of about once in 51 cases, while I have been using them in my practice for the last thirty-five or forty years in every sixth or eighth case. With our present knowledge, it is surely a fair question to ask whether their timely use would not have saved the lives of some of the ten children classed as still-born? In my writings upon this subject my contention has been that the most trying portion of the labour for the child is the second stage, and that this, as a rule, should not be allowed much to exceed two hours; and that when the first stage has been tedious even this should be greatly abridged. I am afraid it is in carrying out this rule that maternity institutions still need reformation; and I doubt whether the proper reformation ever will come until the resident surgeon is empowered to apply the forceps in all simple cases, such, for instance, as those where the face is in the hollow of the sacrum, or where an ear can be felt on a level with the symphysis, reserving more important cases for the special care of the consulting physicians.

In the case where Tarnier's forceps were applied, I may remark that the injuries to mother and child were much greater than I have seen in my own forceps cases. The woman was delivered on 9th December, but was not discharged till 14th January, and the catheter had to be used daily for two weeks; while the child, from facial paralysis, had to be fed with a spoon for several days.

Hoping that those connected with the Hospital will take these strictures and remarks in good part, and as if I had made them when the report was presented to the Obstetrical Society, I am, dear Sir, yours truly,

G. Hamilton, M.D.

## PUBLICATIONS RECEIVED.

Benson Baker, M.D.,—How to Feed an Infant. Baillière, Tindall, & Cox, Lond., 1880.

C. H. Blackley, M.D.,—Hay Fever. Baillière, Tindall, & Cox, London, 1880.

J. H. Balfour Brown.—Water Supply. Macmillan & Co., London, 1880.

Bristol Royal Infirmary Reports. Vol. I.

J. C. Bucknill, M.D., — The Care of the Insane. Macmillan & Co., London, 1880.

T. S. Dowse, M.D.,—Neuralgia; its Nature and Curative Treatment. Baillière, Tindall, & Cox, London, 1880.

Fifteenth Annual Report of the Sanitary Commissioner for Madras, 1878.

Anton Floystrup,—Den Prophylaktiske og Kurative Antiseptik under Fodsel og Bar-selsing. W. P. Forlag, Kjobenhavn, 1880.

T. R. Fraser, M.D., F.R.S.,—Alcohol; its Function and Place. David Douglas, Edinburgh, 1880.

W. R. Gowers, M.D., F.R.C.P.,—Diagnosis of Diseases of the Spinal Cord. J. & A. Churchill, London, 1880.

Dr Greenfield and Dr Goodhart,—Atlas of Illustrations of Pathology. Fasc. II. New Sydenham Society, 1880.

V. Harris, M.D., and D'Arcy Power, B.A., — Manual for the Physiological Laboratory. Baillière, Tindall, & Cox, London, 1880.

F. Hebra, M.D., and Moriz Kaposi, M.D., — Diseases of the Skin. New Sydenham Society, 1880.

J. Kraus, M.D.,—Carlsbad and its Natural Healing Agents. Trübner & Co., Lond., 1880.

J. Wickham Legg,—A Guide to the Examination of the Urine. H. K. Lewis, London, 1880.

Wm. MacCormac, M.A.,—Antiseptic Surgery. Smith, Elder, & Co., Lond., 1880.

F. N. Macnamara, M.D., — Himalayan India; its Climate and Diseases. Longmans, Green, & Co., London, 1880.

E. A. Morshead, M.R.C.S.,—Tables of the Physiological Action of Drugs. H. K. Lewis, London, 1880.

T. G. Morton, M.D., and Wm. Hunt, M.D., —Surgery in the Pennsylvania Hospital. J. B. Lippincott & Co., Philad., 1880.

A. B. Palmer, A.M., M.D.,—Homœopathy; What is it? Geo. S. Davis, Detroit, 1880.

R. W. Parker,—Tracheotomy in Laryngeal Diphtheria. David Bogue, Lond., 1880.

John Parkin, M.D., — Epidemiology. David Bogue, London, 1880.

Surgeon-Major J. H. Porter,—The Surgeon's Pocket-Book. Charles Griffin & Company, London, 1880.

Henry Power, M.D., and Leonard W. Sedgwick, M.D.,—Lexicon of Medicine and the Allied Sciences. Part III. New Sydenham Society, 1880.

Balmanno Squire, M.B.,—The Pharmacopœia of the British Hospital for Diseases of the Skin. J. & A. Churchill, London, 1880.

James Tyson, M.D.,—Guide to the Practical Examination of Urine. Lindsay & Blakiston, Philadelphia, 1880.

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*Meeting* viii., 6*th May* 1879.—Exhibition of patients and specimens by Drs Miller, Cadell, Jamieson, Clouston, P. H. Watson, Byrom Bramwell, Groves, and Mr Bell; notes on healing of wounds by Dr D. J. Hamilton; remarks made by Messrs Spence and Chiene and Drs Foulis and Watson, 162–165.

*Meeting* ix., 4*th June* 1879.—Specimen exhibited by Dr Watson; paper read by Dr Byrom Bramwell on the patellar tendon reflex; discussion on by Drs Grainger Stewart, Sanders, and Brakenridge; paper read by Dr Spence on strangulated hernia, discussed by Drs Watson and Miller and Mr Bell, 254–258.

*Meeting* x., 17*th June* 1879.—Specimens shown by Drs Littlejohn, Craig, Miller, and Mr Joseph Bell; paper read by Dr Henderson on elephantiasis arabum; discussion on by Drs A. Robertson, Watson, and Jamieson, Surg.-Maj. Black, and Mr Bell, 337–341.

*Meeting* xi., 2*d July* 1879.—Patient exhibited by Dr Carmichael; specimen by Dr Kirk Duncanson; paper read by Mr Chiene on counter-irritation; paper read on case of double floating kidneys by Dr Hunter; discussion on by Drs Sanders, Stewart, Wilson, Simpson, Sims, Logie, and Hunter, and Mr Annandale; case of Pott's curvature, shown by Dr Grainger Stewart; paper by Dr Wortabet on bilharzia hæmatobia, read by Dr Cadell, 456–459.

*Session* lix.—*Meeting* i., 8*th November* 1879.—Specimens exhibited by Drs Bramwell, Macgillivray, and Cadell; paper read by Dr A. James on transudations and exudations; discussion on by Drs Haycroft and Bramwell and Mr Hamilton, 552–560.

*Meeting* ii., 17*th December* 1879.—Patient and specimens exhibited by Drs Jamieson, Watson, and Andrew, and Mr Hamilton; paper read by Dr Carmichael on lesion; discussion by Drs Clouston, James, Buist, and Mr Hamilton; paper read, Dr Wyllie for Dr Lucas, on "Is cutaneous alimentation effective?" discussion by Drs Jamieson and Black, 648–654.

*Meeting* iii., 7*th January* 1880.—Prof. Sanders delivered retiring address, and proposed as successor Dr P. H. Watson; patient exhibited by Mr Bell; remarked on by Dr Jamieson; specimens shown by Drs James and Miller; Dr Young communicated paper by Dr Phillippo on tetanus; remarks on by Profs. Sanders and Fraser; Dr W. Taylor communicated paper on menthole by Mr A. D. Macdonald; remarks, Professor Fraser and Drs Duncan and Miller, 747–750.

*Meeting* iv., 4*th February* 1880.—Patient shown by Dr Cadell; specimens exhibited by Drs Watson, Carmichael, Miller, and Cadell; paper read by Dr A. Jamieson of general exfoliative dermatitis; notes of cases of spina bifida, by Mr John M'Watt, read by the secretary; remarks on by Drs Watson and Jamieson, 840–842.

*Meeting* v., 3*d March* 1880.—Patient exhibited by Dr Cadell; specimens by Drs Foulis, Bramwell, and Watson; note communicated by Mr Chiene on case of death by chloroform by Dr G. Silke; remarks by Messrs Duncan, Bell, and Annandale, and Drs Carmichael, Foulis, Imlach, and Watson, 924–934.

*Meeting* vi., 7*th April* 1880.—Exhibition of patients by Mr Bell, Dr Wylie, and specimens by Drs Coldstream, Miller, Allan Jamieson, and Heron Watson; paper read by Dr Jamieson on cleft palate; discussion on by Mr Bell and Drs Watson and James; paper read by Dr Miller on cases of erysipelas; discussion on by Drs Watson and Jamieson, and Messrs Bell, Chiene, and Duncan, 1111–1116.

Society, Reports of Obstetrical.—*Session* xxxviii.—*Meeting* viii., 19*th March* 1879.—Specimens exhibited by Drs Young, Wilson, and Simpson; paper read by Dr Allan Jamieson on prevention of mammary abscess; remarks on by Drs Keiller, Simpson, Charles Bell, Young, Napier, Underhill, Carmichael; notes on a case of labour by Professor Simpson; remarks on by Drs Keiller, Kirk Duncanson, and P. A. Young; notes on midwifery case by Dr Napier; remarks on by Drs Keiller, Simpson, and Ritchie, 74–76.

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*Meeting* xii., 25*th June* 1879.—Specimen shown by Dr Young; specimen and paper from Dr Duncan, Dundee, the paper read by Professor Simpson on calcified fibroid tumour; notes by Professor Simpson on another case of fibroid tumour; discussion on by Drs Bell and Baird; paper read by Dr Baird on puerperal septicæmia; discussion on by Drs Wilson, Macdonald, and Simpson; paper read by Dr Hart on bearings of fœtal head on the mechanism of labour; discussion on by Drs Simpson, Macdonald, and Bell, 258–264.

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